



Saskatchewan Mining Association | 2021 Environmental Forum

Overview of the NexGen Energy Ltd. Rook I Project
Luke Moger, Vice President, Environment, Permitting and Licensing
October 2021



Delivering the **clean energy** of the future.

Forward Looking Statements

Information Contained in this Presentation

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Generally, but not always, forward-looking information and statements can be identified by the use of words such as "plans", "expects", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates", or "believes" or the negative connotation thereof or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur" or "be achieved" or the negative connotation thereof. Statements relating to "mineral resources" are deemed to be forward-looking information, as they involve the implied assessment that, based on certain estimates and assumptions, the mineral resources described can be profitably produced in the future. Forward-looking information and statements are based on the then current expectations, beliefs, assumptions, estimates and forecasts about NexGen's business and the industry and markets in which it operates. Forward-looking information and statements are made based upon numerous assumptions, including among others, that the mineral reserve and resources estimates and the key assumptions and parameters on which such estimates are based are as set out in this presentation and the technical report for the property, the results of planned exploration activities are as anticipated, the price and market supply of uranium, the cost of planned exploration activities, that financing will be available if and when needed and on reasonable terms, that third party contractors, equipment, supplies and governmental and other approvals required to conduct NexGen's planned exploration activities will be available on reasonable terms and in a timely manner and that general business and economic conditions will not change in a material adverse manner. Although the assumptions made by the Company in providing forward looking information or making forward looking statements are considered reasonable by management at the time, there can be no assurance that such assumptions will prove to be accurate in the future. Forward-looking information and statements also involve known and unknown risks and uncertainties and other factors, which may cause actual results, performances and achievements of NexGen to differ materially from any projections of results, performances and achievements of NexGen expressed or implied by such forward-looking information or statements, including, among others, the existence of negative operating cash flow and dependence on third party financing, uncertainty of the availability of additional financing, the risk that pending assay results will not confirm previously announced preliminary results, conclusions of economic valuations, the risk that actual results of exploration activities will be different than anticipated, the cost of labour, equipment or materials will increase more than expected, that the future price of uranium will decline or otherwise not rise to an economic level, the appeal of alternate sources of energy to uranium-produced energy, that the Canadian dollar will strengthen against the U.S. dollar, that mineral resources and reserves are not as estimated, that actual costs or actual results of reclamation activities are greater than expected, that changes in project parameters and plans continue to be refined and may result in increased costs, of unexpected variations in mineral resources and reserves, grade or recovery rates or other risks generally associated with mining, unanticipated delays in obtaining governmental, regulatory or First Nations approvals, risks related to First Nations title and consultation, reliance upon key management and other personnel, deficiencies in the Company's title to its properties, uninsurable risks, failure to manage conflicts of interest, failure to obtain or maintain required permits and licences, risks related to changes in laws, regulations, policy and public perception, as well as those factors or other risks as more fully described in NexGen's Annual Information Form dated March 19, 2021 filed with the securities commissions of all of the provinces of Canada except Quebec and in NexGen's 40-F filed with the United States Securities and Exchange Commission, which are available on SEDAR at www.sedar.com and Edgar at www.sec.gov. This presentation includes Mineral Reserves and Mineral Resources classification terms that comply with reporting standards in Canada and the Mineral Reserves and the Mineral Resources estimates are made in accordance with NI 43-101. NI 43-101 is a rule developed by the Canadian Securities Administrators that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. These standards differ from the requirements of the Securities and Exchange Commission ("SEC") set the SEC's rules that are applicable to domestic United States reporting companies. Consequently, Mineral Reserves and Mineral Resources information included in this presentation is not comparable to similar information that would generally be disclosed by domestic U.S. reporting companies subject to the reporting and disclosure requirements of the SEC. Accordingly, information concerning mineral deposits set forth herein may not be comparable with information made public by companies that report in accordance with U.S. standards. Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in the forward-looking information or statements or implied by forward-looking information or statements, there may be other factors that cause results not to be as anticipated, estimated or intended. Readers are cautioned not to place undue reliance on forward-looking information or statements due to the inherent uncertainty thereof. There can be no assurance that forward-looking information and statements will prove to be accurate, as actual results and future events could differ materially from those anticipated, estimated or intended. Accordingly, readers should not place undue reliance on forward-looking statements or information. The Company undertakes no obligation to update or reissue forward-looking information as a result of new information or events except as required by applicable securities laws.

NexGen | Who we are

NexGen is advancing the generational **Rook I Project** which will be the largest producer of uranium globally when in production at a time the world is experiencing an increase in electricity consumption with the primary objective of decarbonization.

A team of experienced uranium industry professionals with expertise in exploration, corporate finance, mine development, and operations, NexGen is focused on setting elite standards in every respect of our conduct and operations.



PURPOSE

Create as much positivity as possible – socially, economically, environmentally.



VISION

Become a world leading uranium producer delivering the clean energy needs of the future.



MISSION

Build a sustainable clean energy legacy through elite standards in environmental performance, mine management and community advancement.



VALUES

honesty, respect, resilience, accountability



Listed under NXE Ticker:

TSX-V	2013
TSX	2016
NYSE	2017
ASX	2021



Awards and Recognitions:

- 2018 PDAC Bill Dennis Award for Canadian Mineral Discovery
- 2019 PDAC Environmental & Social Responsibility Award
- 2020 Paragon Award for Community Excellence

NexGen Energy Ltd. | History

- Founded in 2010 by Leigh Curyer and group of proven uranium industry professionals.
- Shared belief that uranium would play a critical role in the delivery of a clean energy future for the planet.
- Focused on the acquisition, exploration and development of Canadian uranium projects.
- Set out to find a Tier One asset.
- Currently advancing the Rook I Project in alignment with visions, values and with an elite ESG profile.

Discoveries



Rook I Project | The Need


Major governments and corporations have made commitments to cut their carbon emissions to reach net zero in coming years. Nuclear energy must be part of the energy mix to combat climate change.



REUTERS

U.S. eyes nuclear reactor *tax credit* to meet climate goals

MAY 5, 2021



"We are **not going to be able to **achieve** our climate goals if nuclear power plants **shut down**"**

*Jennifer Granholm,
United States Secretary of Energy*



Nuclear must be part of the solution to climate change

EUROPE

AGAIN LOOKING TO EXPAND

NUCLEAR ENERGY



"Nuclear energy has near to **zero greenhouse gas emissions in the energy generation phase and can be a contributor to climate mitigation objectives."**

European Commission Report, JRC Science for Policy Report, 2021





CANADA:
A WORLD LEADER
IN SMALL MODULAR REACTOR (SMR) DEVELOPMENT



Federal SMR Action plan driving **innovation and research**



MOUs signed in **SK, ON, NB** and **AB** to develop SMRs

SOURCE: GOVERNMENT OF CANADA, MINISTER OF NATURAL RESOURCES

Rook I Project | Low cost, long life, environmentally elite

- Largest development-stage uranium project in Canada
- Land-based, basement-hosted **Arrow Discovery**
- Underground mine, surface mill and ancillary facilities, and an underground tailings management facility
- Will be a significant supplier of uranium to help meet growing global demand for electricity from clean, low-carbon sources such as nuclear power
- A leading global resource project with reserves supporting a mine life of 11 years, and a resource open in all directions
- Elite Environmental, Social and Governance (ESG) commitments to the advancement of environment and community
- Project advancement
 - 2017 Preliminary Economic Assessment
 - 2018 Pre-feasibility Study
 - 2021 Feasibility Study (US\$50/lb U₃O₈)



Rook I Project Indigenous and Community | Engagement and Partnership

Engagement as a Core Value:

- Setting the standard for meaningful engagement in the natural resources sector
- Engagement with local communities and Indigenous Groups commenced prior to the first hole being drilled at the Rook I Project in 2013

Communities:

- Clearwater River Dene Nation
- Métis Nation of Saskatchewan, Métis Northern Region II
- Birch Narrows Dene Nation
- Buffalo River Dene Nation

Joint Working Group(s)

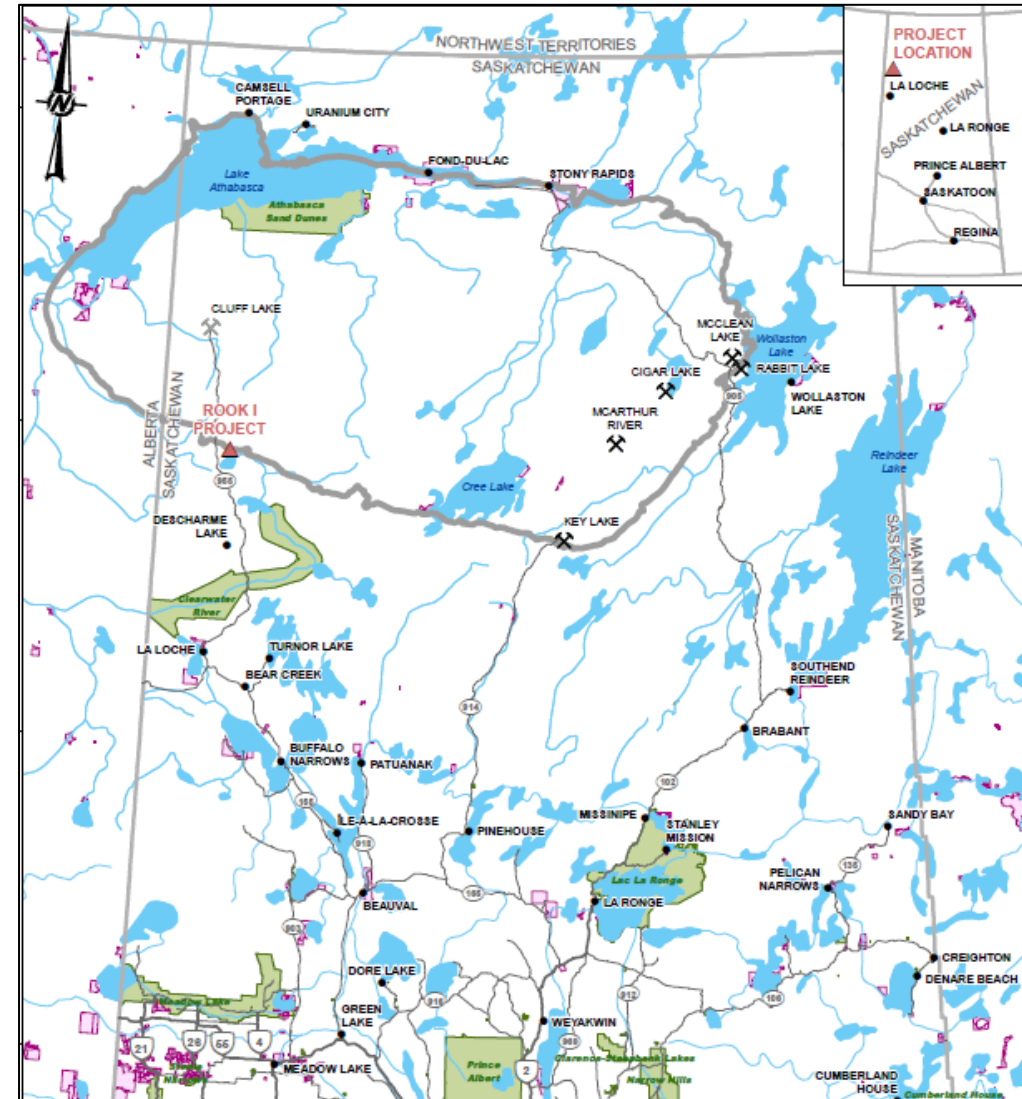
- Support the inclusion of Indigenous Knowledge (IK) throughout the environmental assessment process
- Comprising Senior NexGen staff and representatives appointed by elected Indigenous Leadership

Partnership Approach: Study Agreements

- Define framework for collection of information to support the environmental assessment process
- Provide capacity for a Community-led Traditional Land Use (TLU) Study and gathering of IK specific to the Rook I Project

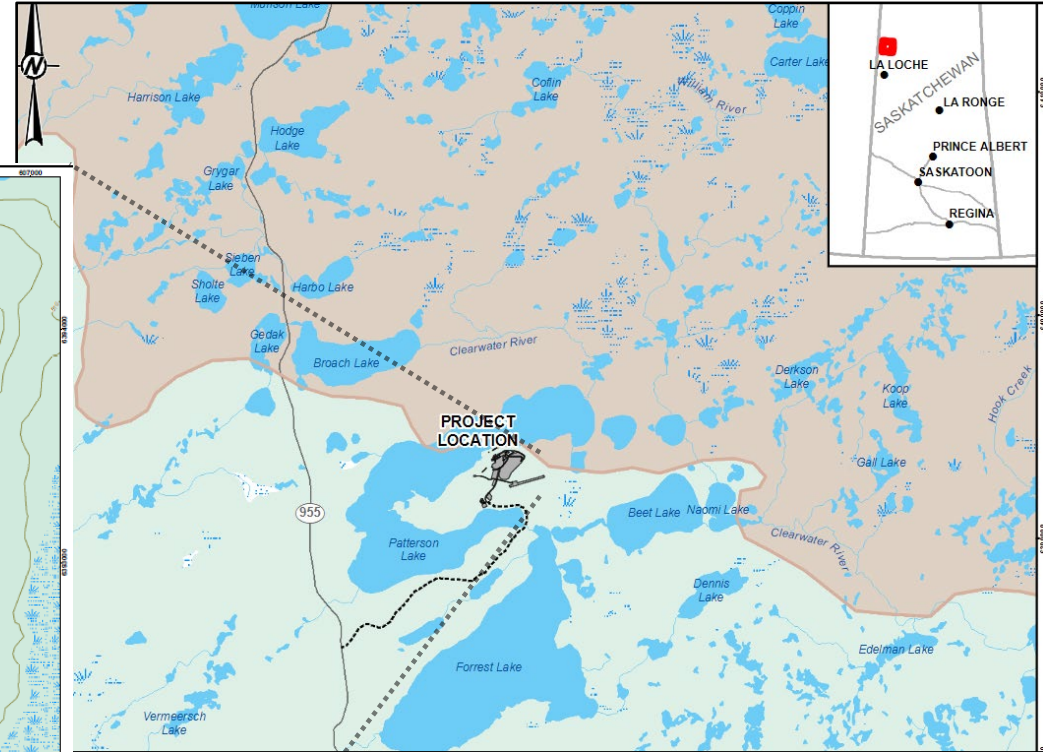
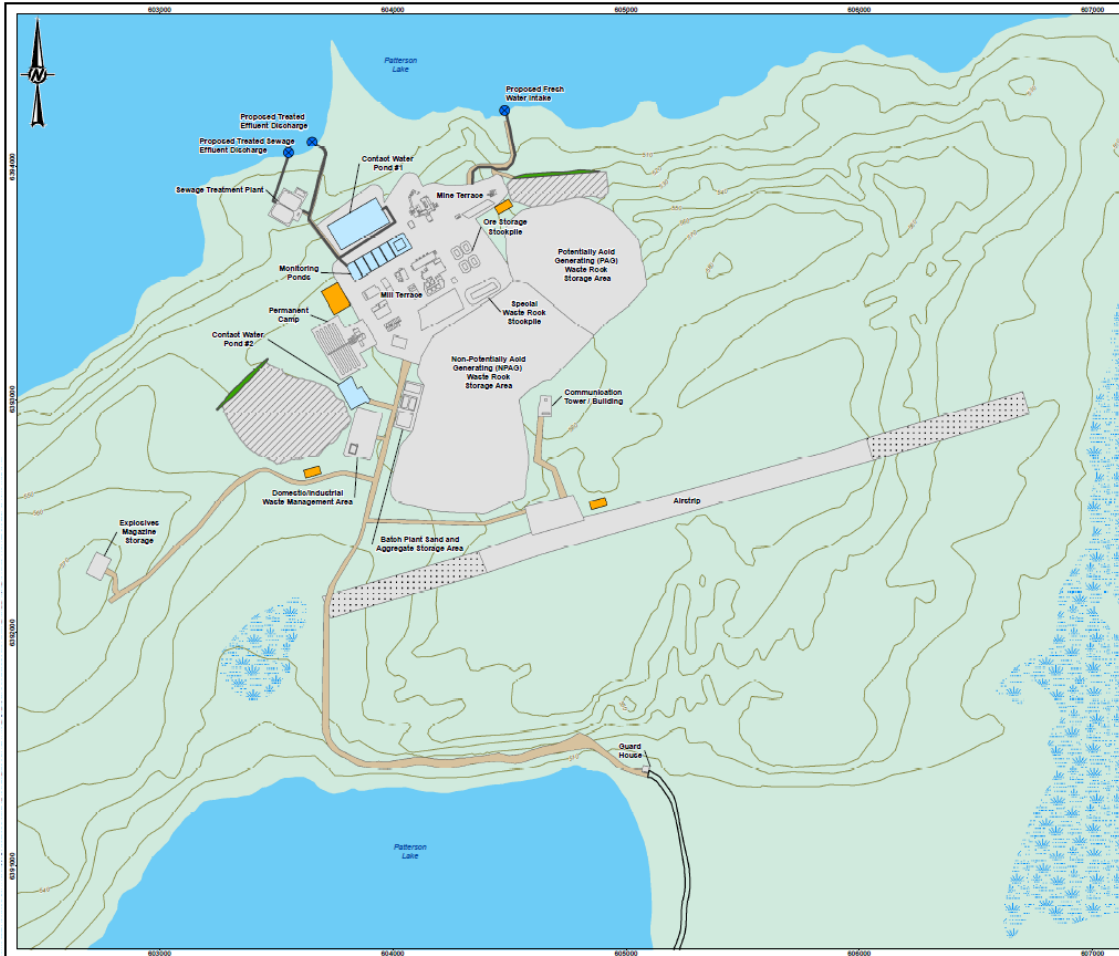
Impact & Mutual Benefit Agreements (IBAs)

- Two (2) agreements signed; additional negotiations ongoing



Rook I Project | Overview

- Northwest Saskatchewan
- Adjacent to Patterson Lake



**Project Infrastructure
Footprint ≈ 230 hectares**

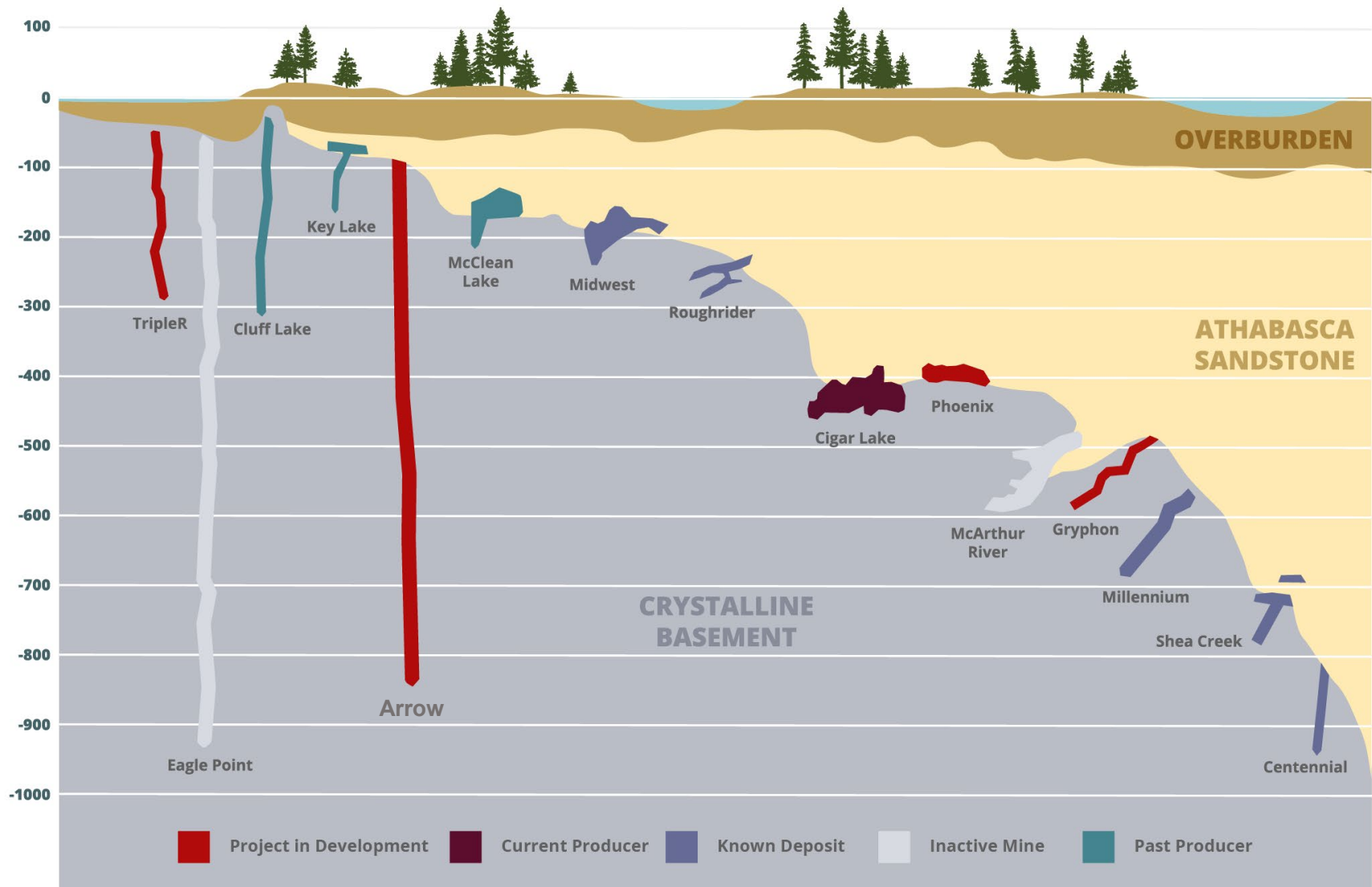
Rook I Project | Our commitment to elite environmental performance

NexGen Energy is committed to elite environmental performance throughout all phases of developing and incorporating best-in-class environmental practices, designs and technologies. These methods and elite standards leverage NexGen's experience and known technologies to ensure the health and safety of personnel and the protection of the environment.

- Exercising responsible stewardship of air, land, and water resources
- Applying economically viable best available technology and practices
- Keeping all releases and adverse impacts as low as reasonably achievable
- Respecting the principle of pollution prevention
- Designing and operating for responsible closure
- Minimizing the generation of waste
- Responsibly managing tailings and waste facilities throughout their lifecycle
- Responsibly managing energy use and greenhouse gas emissions
- Monitoring and assessing against indicators and targets based on sound science



Rook I Project | Geological Setting



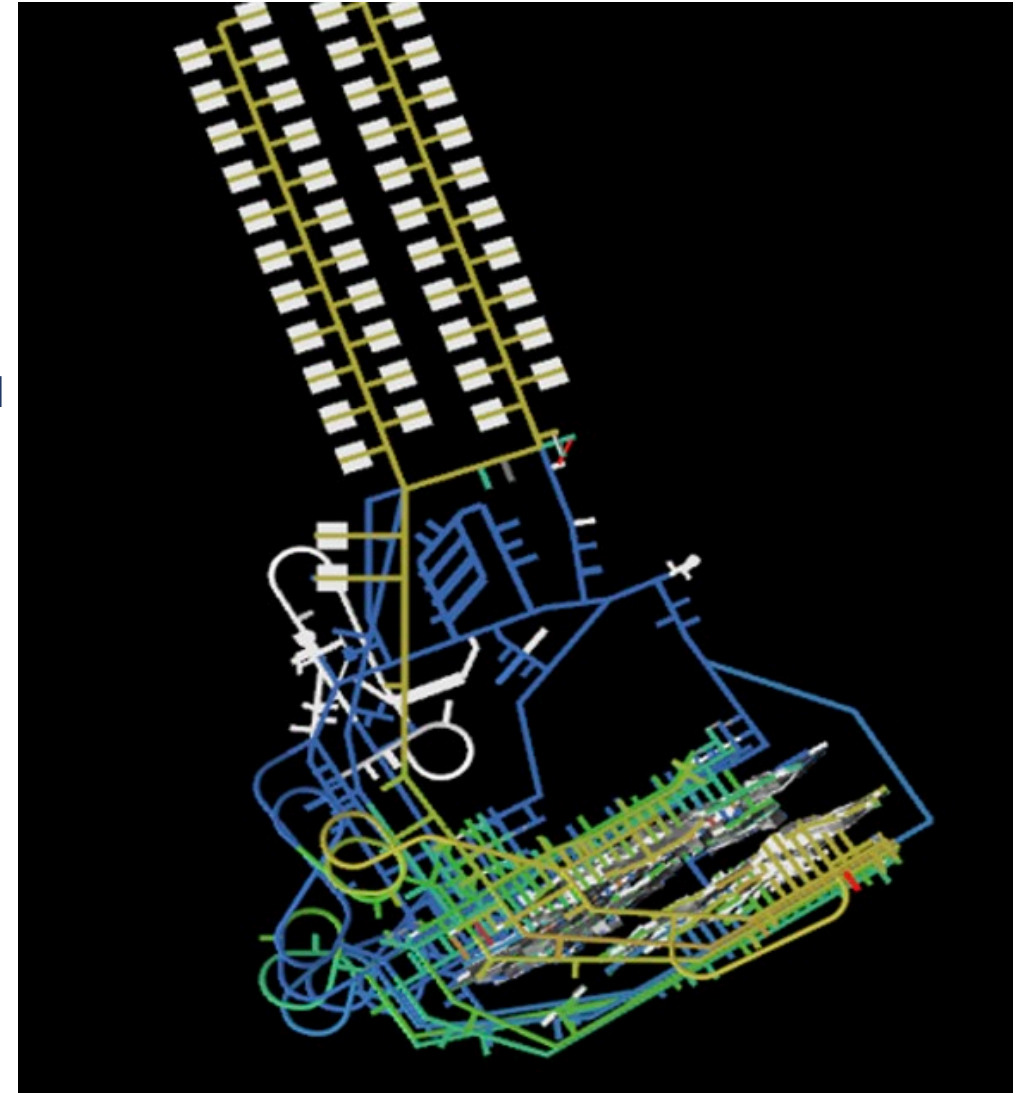
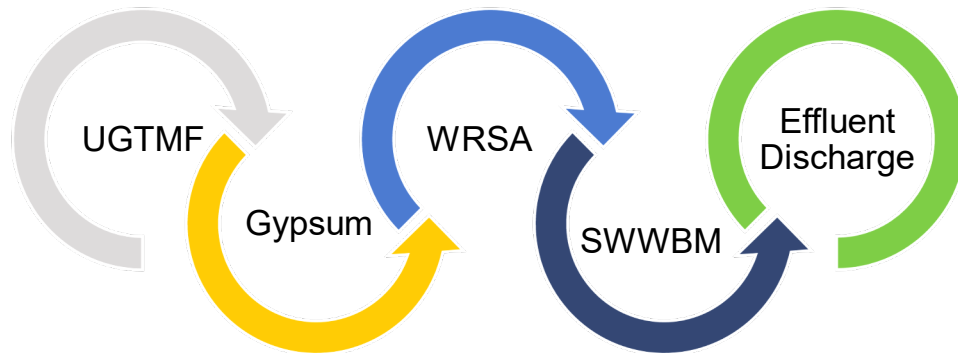
Rook I | Best in class tailings management approach

All processed waste streams to be stored underground, either in **backfilled mine stopes** or in a purpose-built **Underground Tailings Management Facility (UGTMF)**.

The UGTMF will significantly reduce the surface footprint of the Project and represents continued and ongoing reclamation during operations.

Feasibility Study test work confirmed paste fill strength meets or exceeds all requirements set in the original design for a potential paste backfill to be used for underground stope stability.

ZERO risk of surface tailings failures, entirely mitigating one of the largest risk potentials in existing and development-stage mining projects.



WRSA: Waste Rock Storage Area
SWWBM: Site-wide Water Balance Model

Rook I Permitting | Integrated Approach

Overview

Harmonized provincial and federal Environmental Assessment process, coordinated by the Canadian Nuclear Safety Commission (CNSC)

- Saskatchewan: *The Environmental Assessment Act*
- Canada: *Canadian Environmental Assessment Act, 2012*

Integrated federal permitting and licensing advancing in parallel

- Currently advancing licensing scope for site preparation, construction and commissioning
- Early engagement with federal regulators on Licence Application and Integrated Management System

Status

Environmental Assessment

- Formally commenced with submission of Project Description (February 2019)
- Revised Project Description and Terms of Reference submitted (April 2019)
- CNSC Decision on Environmental Assessment scope received (February 2020)

Licence Application

- Formally commenced with initial Licence application submission (February 2019)
- Submission of additional information to support the Licence application ongoing

Rook I Permitting | Aligning Values for Positive Outcomes

NexGen Approach: Advancing a Tier 1 Project with a Values-Based Organization

Indigenous and Community Engagement

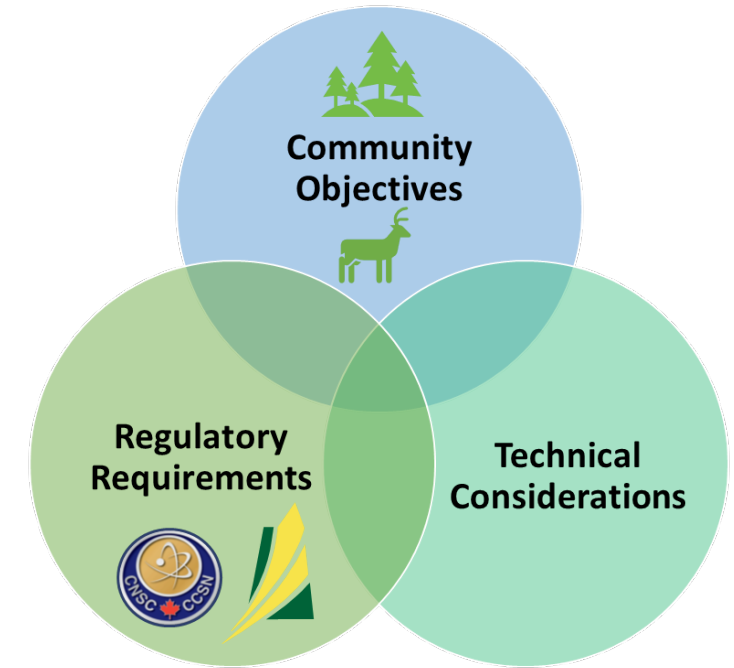
- Study Agreements for the inclusion of Indigenous Knowledge during the EA Process; five formal (5) study agreements with TLUs
- Joint Working Groups and Community information sessions
- Ongoing engagement through COVID-19; transition to virtual meetings

Technically Robust

- Integrated Project Development and EA teams incorporating enhancements into environmental assessment Project case
- Coordinated, multi-disciplinary team with experience in the uranium space

Regulatory Relationships

- Transparent communications
- Ongoing technical presentations



Lifecycle Approach

An aerial photograph of a large, organized camp, likely a concentration camp, featuring numerous small, rectangular wooden barracks arranged in neat, parallel rows. The entire image is overlaid with a semi-transparent blue filter. The word "QUESTIONS?" is centered in white, bold, sans-serif capital letters.

QUESTIONS?



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