



# PLS-TRIPLE R

**DEVELOPING THE ATHABASCA  
BASIN'S NEXT ELITE SHALLOW HIGH-  
GRADE URANIUM MINE**

Corporate Update: April 2024

TSX:FCU OTCQX:FCUUF





# DISCLAIMER & TECHNICAL INFORMATION

## DISCLAIMER

The following information may contain forward-looking statements. Forward-looking statements address future events and conditions and therefore involve inherent risks and uncertainties. Actual results may differ materially from those currently anticipated in such statements.

## TECHNICAL INFORMATION

Certain of the technical information contained herein is derived from the January 17, 2023 news release entitled “Fission Announces Tier 1 Economics for PLS with Feasibility Study: Lower Initial CAPEX, Increased Mine Life, NPV and IRR” describing results of a FS completed on the project – a copy of which will be filed on the Company’s profile on SEDAR at [www.sedar.com](http://www.sedar.com) within 45 days. The FS considers the PLS project as a stand-alone mine and mill operation, which includes development and extraction of the R00E, R780E and R840W zones (Triple R deposit), based on a number of inputs, estimates, and results.

The technical information in this corporate presentation has been prepared in accordance with the Canadian regulatory requirements set out in National Instrument 43-101 and reviewed on behalf of the company by Ross McElroy, P.Geol. President and CEO for Fission Uranium Corp., a qualified person.

The Mineral Resources have an effective date of September 12, 2022, and are reported at a cut-off grade of 0.25% U<sub>3</sub>O<sub>8</sub> based on a long-term price of US\$50 per lb U<sub>3</sub>O<sub>8</sub> and PFS cost estimates. Mineral Reserves have an effective date of January 17, 2023, and are reported at a cut-off grade of 0.25% U<sub>3</sub>O<sub>8</sub> based on a long-term price of US\$65 per lb U<sub>3</sub>O<sub>8</sub> and FS cost estimates.



# FISSION URANIUM SNAPSHOT

*“Fission Uranium is on schedule to become one of the world’s lowest cost uranium producers by 2029”*



## ADVANCED ASSET WITH UNIQUE ADVANTAGES

- Elite economics in leading uranium jurisdiction
- Shallow, high-grade deposit with clear growth path
- Major regional exploration potential

## INDUSTRY LEADING URANIUM DEVELOPMENT TEAM

- Deep expertise in uranium mine development, operations, community & environment
- Award-winning management and exploration team

## ON TARGET FOR PRODUCTION BY 2029

- PLS project progressing rapidly through environmental and permitting stage
- Development milestones being met on time and on budget
- Fast, predictable, low risk construction



# INVESTMENT HIGHLIGHTS

## HUGE GLOBAL DEMAND GROWTH

- Climate change, EVs and energy transition
- Geopolitical conflict
- Energy security means Canadian uranium now critical to western utilities

## TIMING ADVANTAGE

- Uranium sector in sustained deficit; approaching historical supply gap
- Fission owns one of the few advanced development projects able to enter production this cycle

## SUSTAINABLE DEVELOPMENT

- Minimal environmental footprint
- Supportive rights holders & stakeholders
- Clear economic benefits for communities & Province

## TIER ONE ECONOMICS

- Highly cash generative
- 2023 avg. cash costs \$9.77/lb U<sub>3</sub>O<sub>8</sub> (C\$13.02)
- After-tax NPV8% of \$903M (C\$ 1,204M)



# URANIUM'S UNSTOPPABLE DEMAND DRIVERS

*The energy transition, geopolitics, and energy security have fundamentally altered the trajectory of nuclear energy and the uranium market that fuels it.*

- **Reactor construction boom** with estimated 40% new reactors online by 2040
- **New nuclear programs** in major economies throughout EU, N. America, Asia, and Middle East
- **Geopolitical risk** has created an overwhelming demand for energy security, resulting in policy and financial support for reactor fleets
- **Commercial small modular reactors** now a reality with multiple units under construction globally







# URANIUM'S GENERATIONAL SUPPLY CHALLENGE

*The uranium market has been in a sustained state of supply deficit since 2018.*

## PRIMARY SUPPLY YET TO RECOVER FROM 10-YEAR BEAR MARKET

- Producing mines left with depleted reserves, grades
- Expansion projects require major capex
- Few advanced development-stage projects
- Greatly reduced secondary supply
- Incentive price for new production upwards of USD \$90/lb

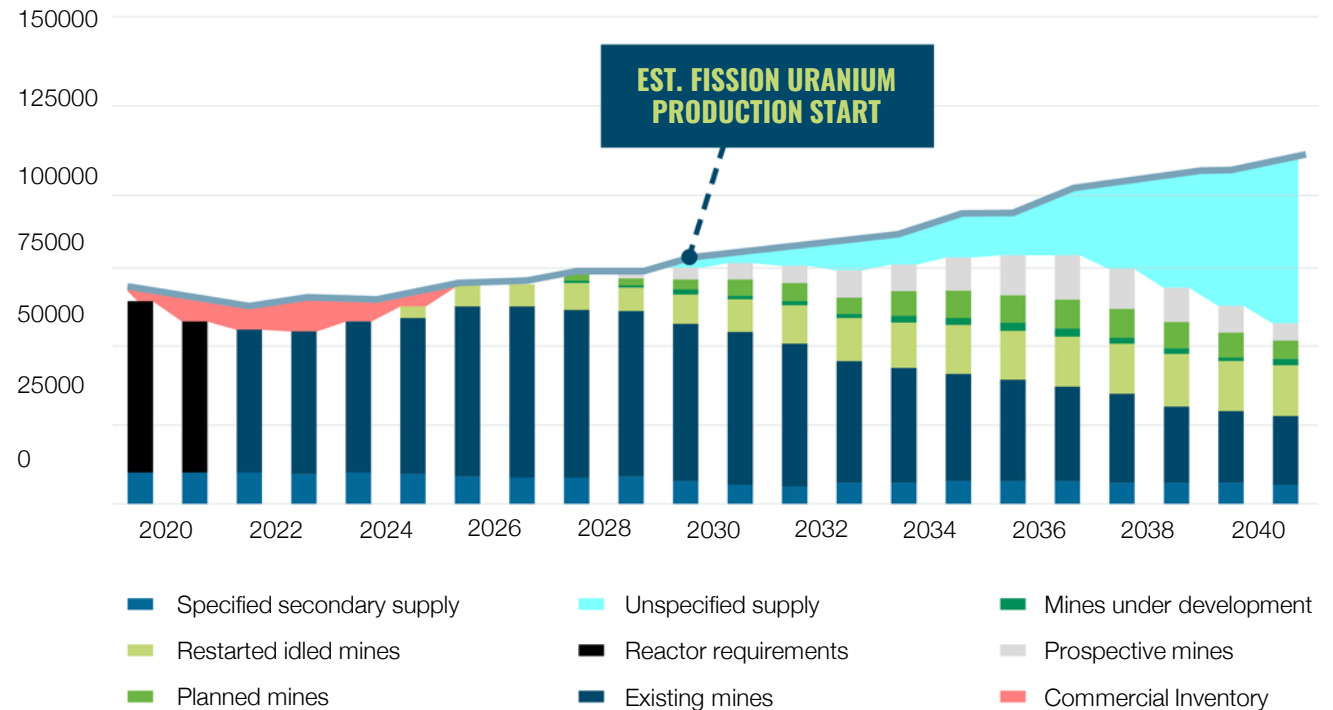
## UNPRECEDENTED ONGOING GEOPOLITICAL RISK TO URANIUM SUPPLY

- ~40% global supply from Kazakhstan (borders Russia, Ukraine)
- ~8% global supply from Russia (war with Ukraine, economic war with the West)
- ~5% global supply from Niger (military coup in 2023, Orano has halted ore processing due to sanctions)



# A GENERATIONAL MOMENT FOR INVESTMENT IN URANIUM

- Buy-and-hold uranium funds removing multi-million lbs from spot market
- Bifurcating markets have increased potential for price spikes
- Fission Uranium on target for production when deficit begins its biggest increase.



Source: WNA Nuclear Fuel Report 2021

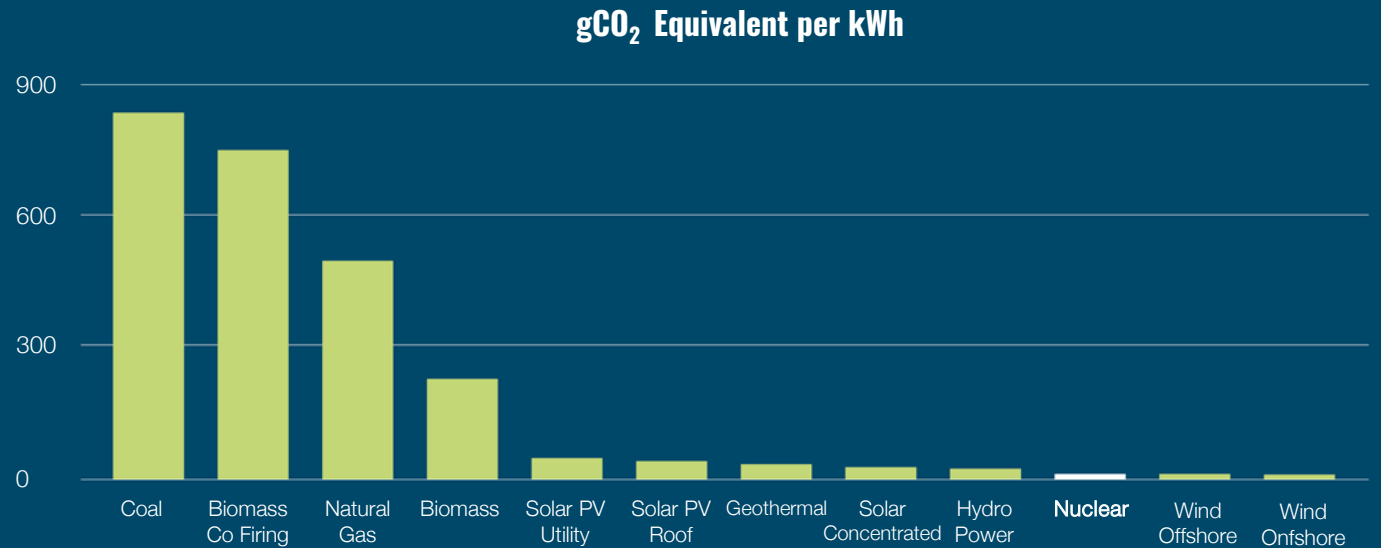
Reference Scenario for Uranium Supply/Demand, tU



# NUCLEAR'S ROLE IN THE ENERGY TRANSITION

*“There is no path to net zero carbon without nuclear”*

- Nuclear energy saves our atmosphere from over 470 million metric tons of carbon emissions each year.<sup>1</sup>
- Power grids are designed for constant power supply and need massive upgrades to use a large percentage of solar and wind. These upgrades will take decades and require vast CAPEX.
- Nuclear is a vital transitional energy source because no alternative for clean, low cost, constant power.
- According to the IEA, nuclear energy capacity must double for the world to reach net zero.



Average life-cycle CO<sub>2</sub> equivalent emissions.





# THE PREMIER HIGH-GRADE URANIUM DISTRICT

*Athabasca Basin, Saskatchewan  
Canada*

## JURISDICTION

Stable, supportive government and communities, skilled workforce and established infrastructure. Straightforward permitting

## TOP-RATED

Saskatchewan is the 2nd most attractive jurisdiction in the world for mining investment - 2021, the Fraser Institute

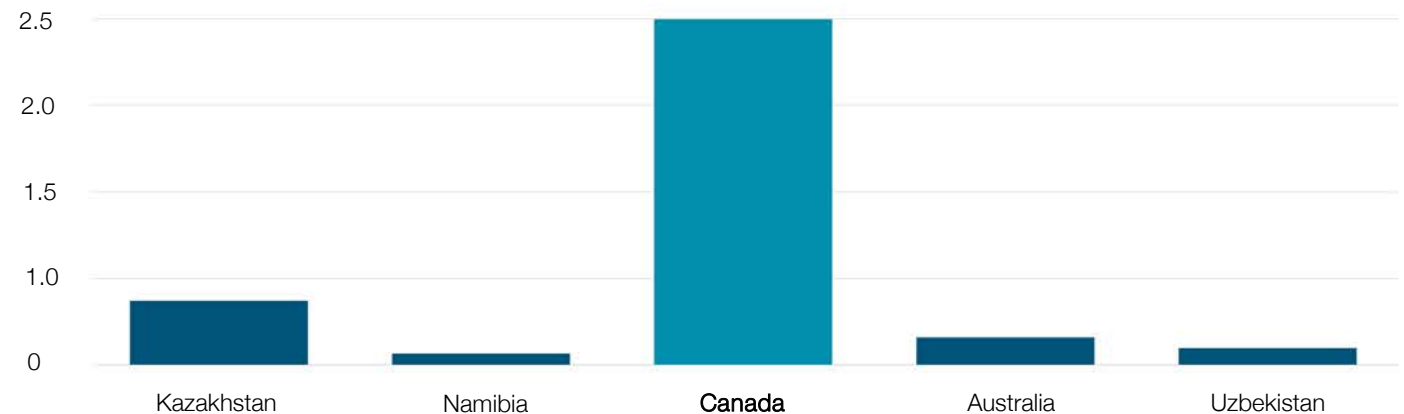
## GLOBAL SUPPLIER

Canada (Saskatchewan) is the world's second largest producer of uranium, accounting for roughly 13% of total global output.

## GRADE

10 to 20 times Global Average

**AVERAGE GRADE % U<sub>3</sub>O<sub>8</sub> (approximate average grade)**





# CANADA'S ATHABASCA BASIN DISTRICT

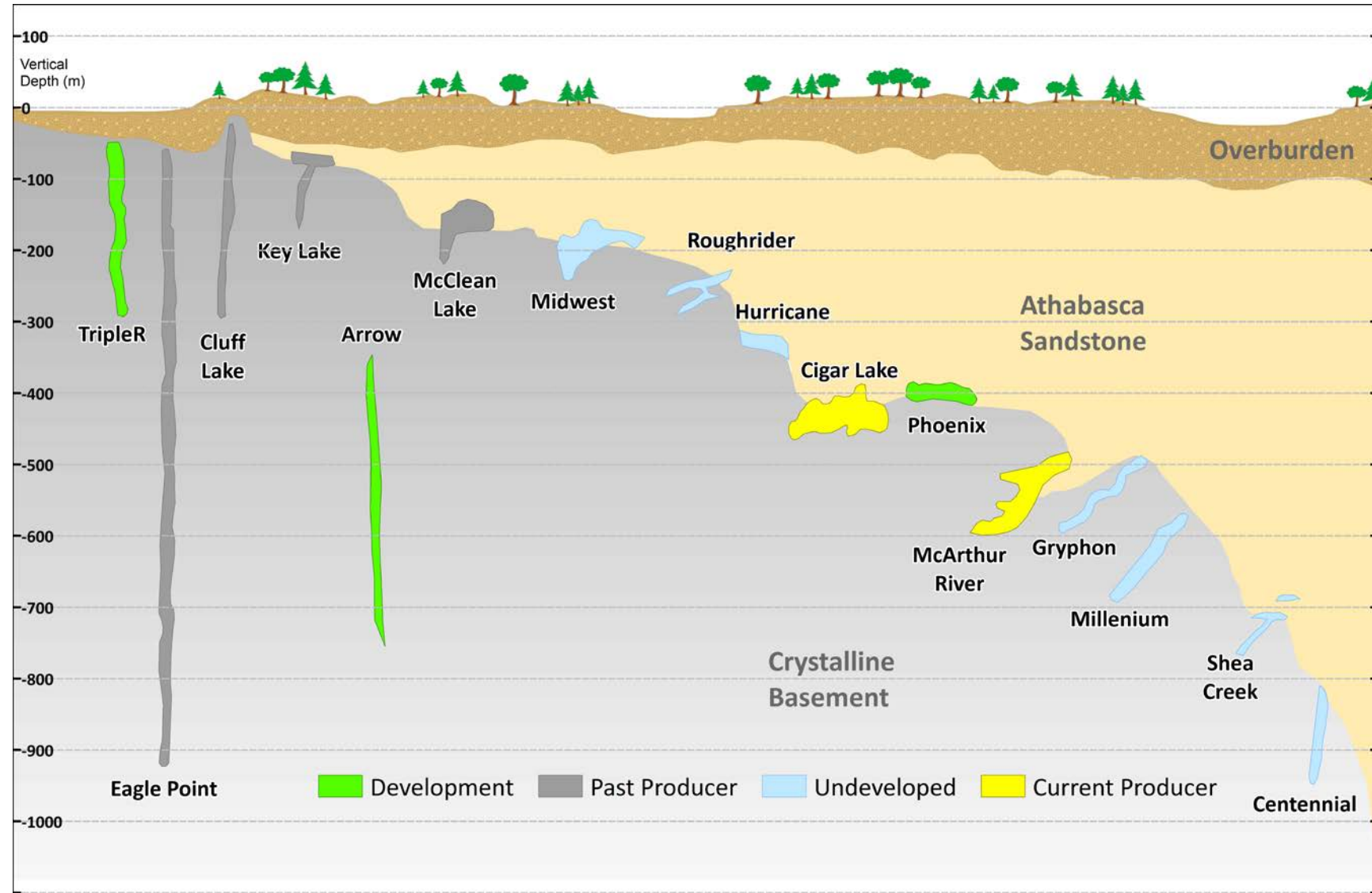


- FCU PROPERTIES
- DEVELOPMENT PROJECTS
- ⚡ CURRENT OPERATIONS
- ⊗ PAST PRODUCERS
- DEPOSITS
- ▲ SHOWINGS
- MILL



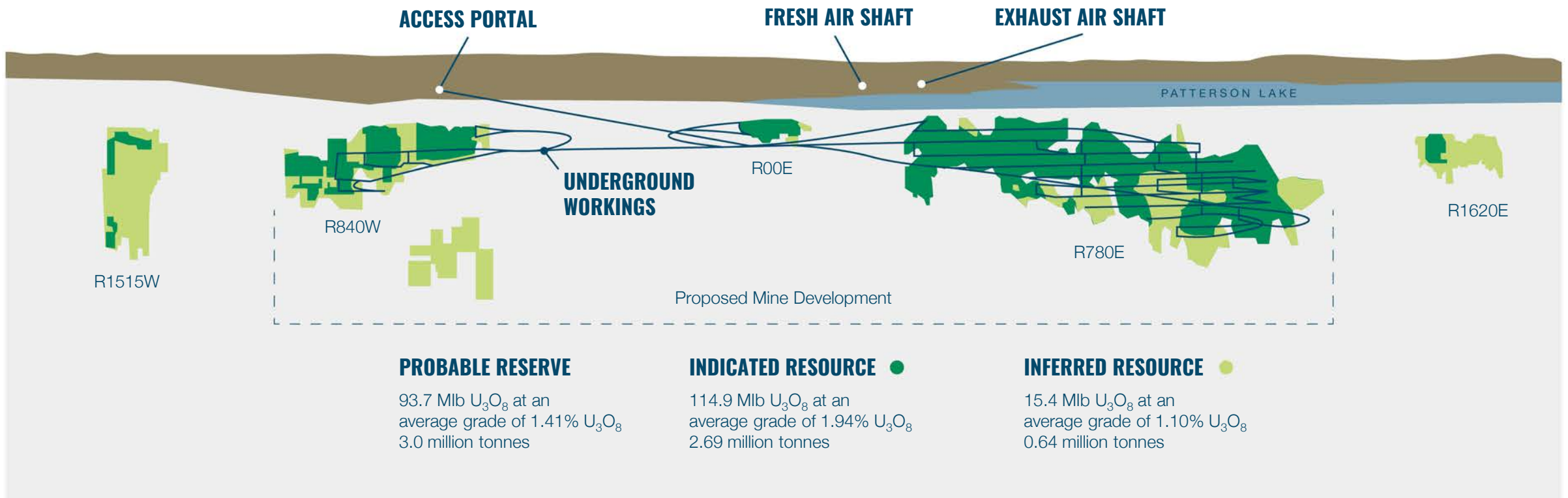
# THE BASIN'S ONLY SHALLOW, HIGH-GRADE, UNDEVELOPED PROJECT

*Fission's Triple R deposit starts 50 metres from surface and sits entirely within basement rock.*





# TRIPLE R DEPOSIT SHALLOW, CONCENTRATED ORE BODY WITH CLEAR GROWTH PATH



Mineral Resources and Reserves are reported within an underground design at a cut-off grade of 0.25% U<sub>3</sub>O<sub>8</sub>.





# ELITE ECONOMICS

*“Fission Uranium’s PLS project demonstrates the potential to be one of the lowest operational cost uranium mines in the world”.*



## JANUARY 2023 FS MINE SCENARIO

Mine Life	Years	10
Construction Period	Years	3
LOM Avg. Head Grade	% U <sub>3</sub> O <sub>8</sub>	1.41
LOM Production	M lbs U <sub>3</sub> O <sub>8</sub>	90.9
Avg. LOM Annual Production	M lbs U <sub>3</sub> O <sub>8</sub>	9.1
Operating Costs	C\$/lb U <sub>3</sub> O <sub>8</sub>	\$13.02
All-in Sustaining Cost	C\$/lb U <sub>3</sub> O <sub>8</sub>	\$18.06
Initial Capital Cost	C\$M	\$1,155
LOM Sustaining Capital Cost	C\$M	\$384
After-Tax Payback Period	Years	2.6

## Project Economics at US\$65/lb U<sub>3</sub>O<sub>8</sub> and C\$1.00:US\$0.75

Pre-Tax Cash Flow	C\$M	\$4,508
After-Tax Cash Flow	C\$M	\$2,787
After-Tax NPV <sub>8%</sub>	C\$M	\$1,204
After-Tax IRR	-	27.2%



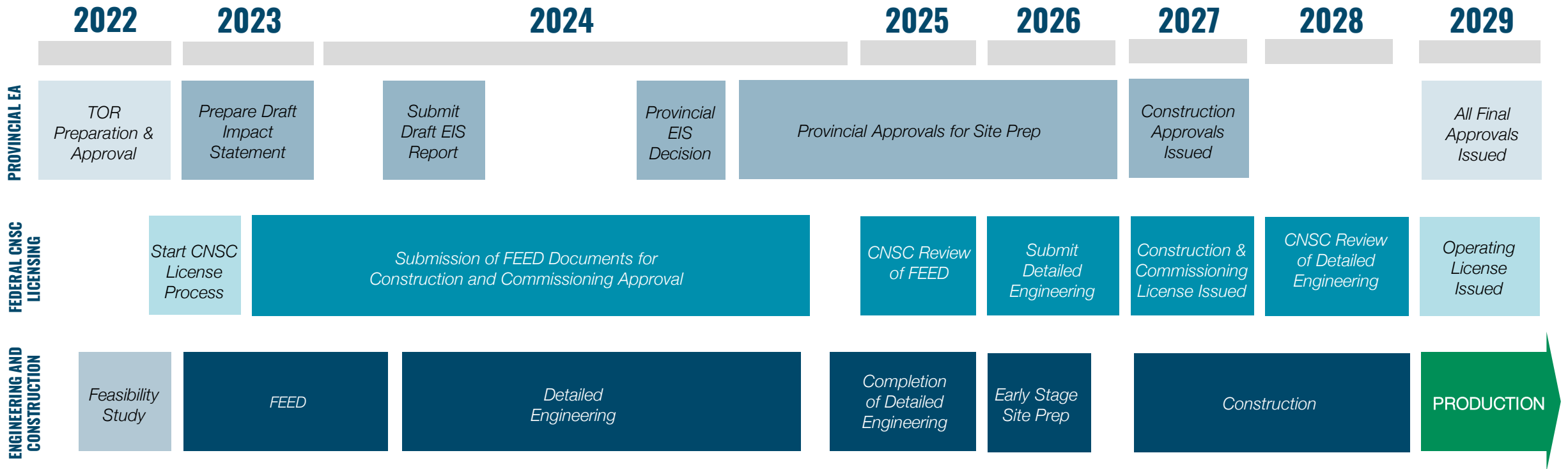
# HIGHLY CASH GENERATIVE IN WIDE RANGE OF PRICE ENVIRONMENTS

*Sensitivity Analysis and Average Annual EBITA*

URANIUM PRICE (USD)	AFTER-TAX NPV (8%) (BILLIONS)	AFTER-TAX IRR	AVG. ANNUAL EBITA (OVER LIFE OF MINE)
\$150/lb	\$4.27	55.3%	\$1.34 Billion
\$100/lb	\$2.47	40.7%	\$0.87 Billion
\$75/lb	\$1.57	31.6%	\$0.63 Billion
FS Base Case \$65/lb	\$1.20	27.2%	\$0.54 Billion
\$60/lb	\$1.02	24.8%	\$0.49 Billion
\$55/lb	\$0.83	22.2%	\$0.45 Billion
\$50/lb	\$0.64	19.4%	\$0.40 Billion

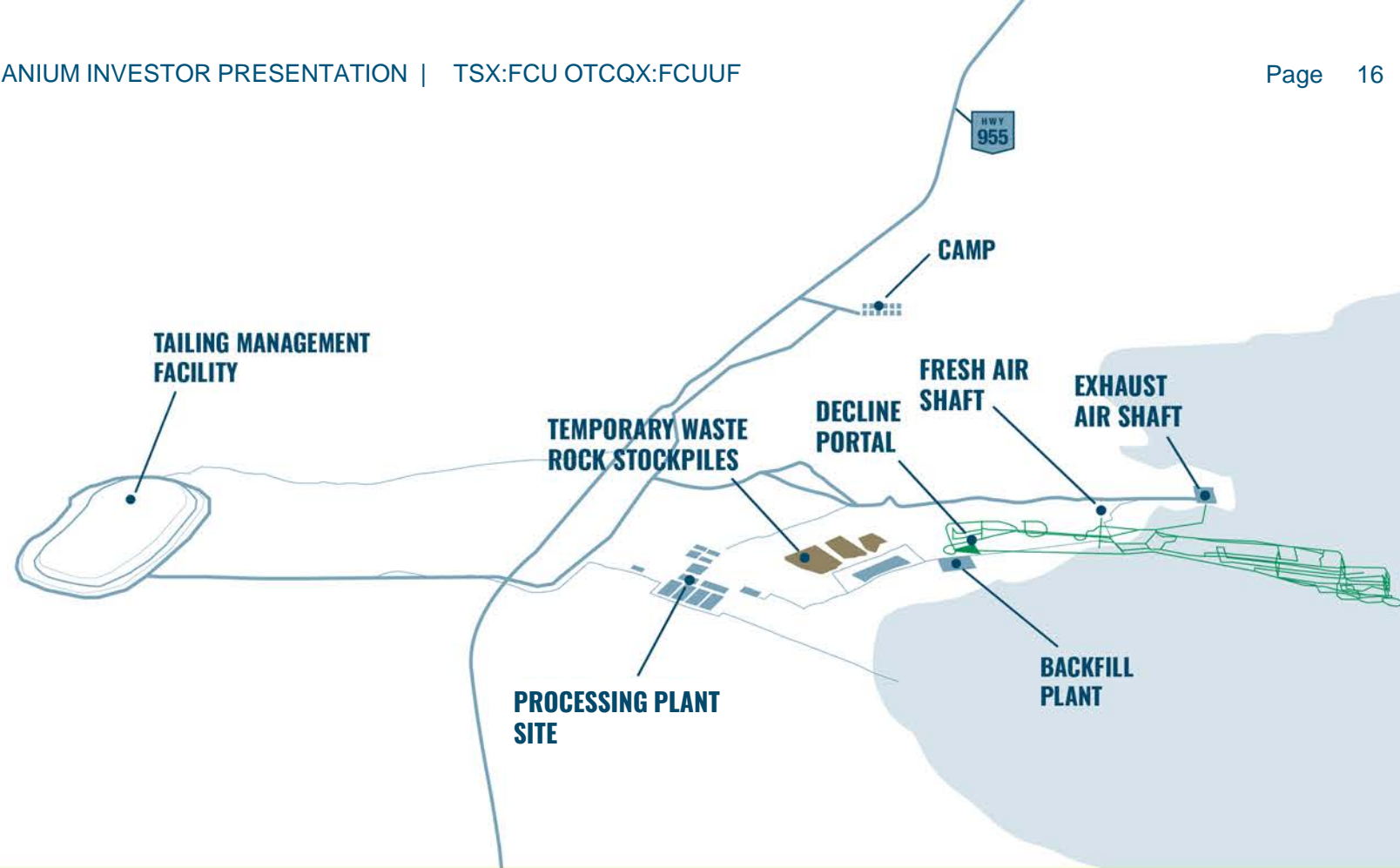


# TIMELINE TO PRODUCTION





# UNIQUE DEVELOPMENT & PRODUCTION ADVANTAGES



## LOW RISK

Hosted in basement rock; avoids the costly water issues faced by Cigar Lake and other eastern Athabasca unconformity mines

## HIGH EFFICIENCY

Shallow, plunging ore body allows decline ramp access – less costly, more efficient than production shafts used by deep mines

## SUPERB METALLURGY

High ore purity supports fast, efficient processing, and high-quality end product

## HIGH PRODUCTIVITY

Mine design and shallow depth = very high tonnes-per-vertical-metre

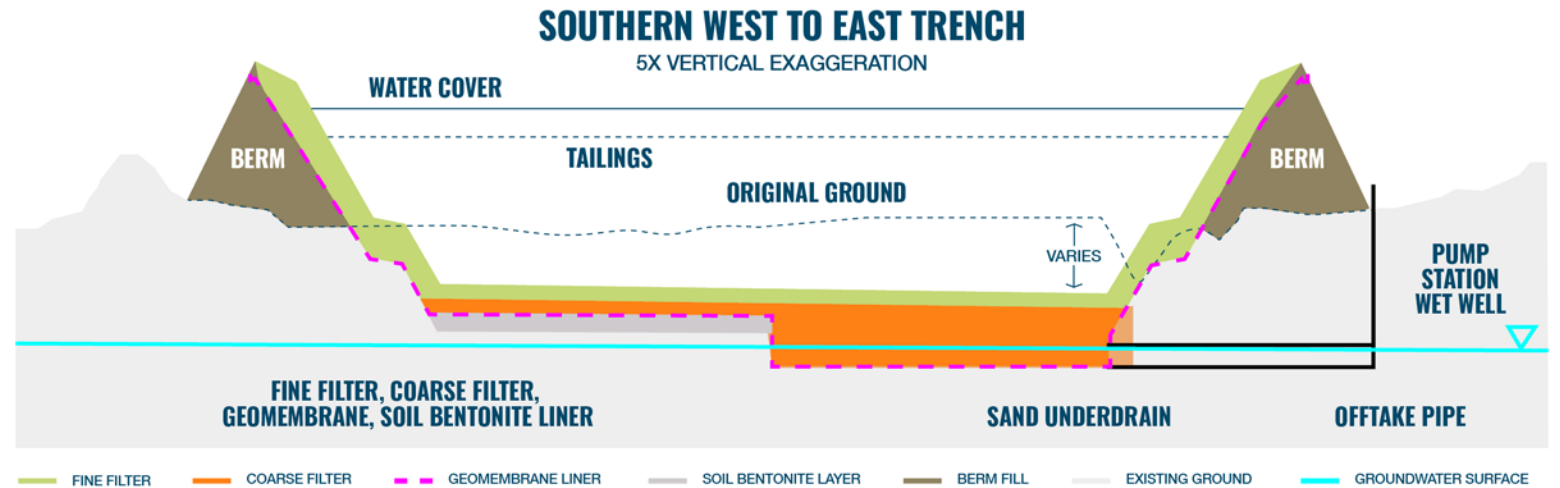
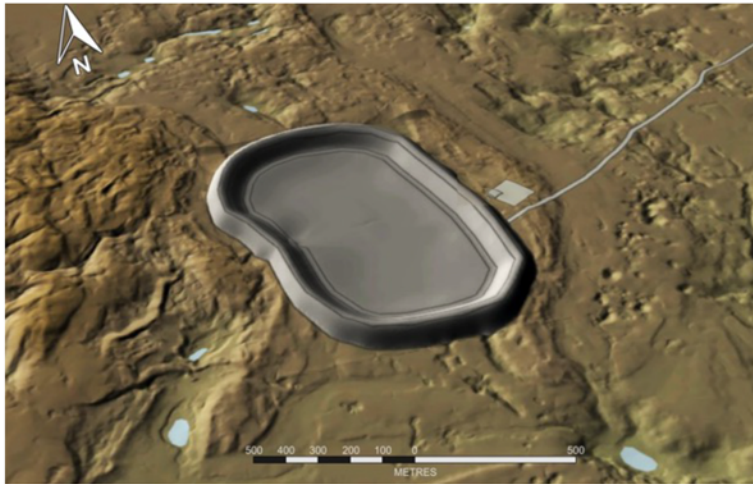
## EXCELLENT ACCESS

Mine site is just 2 km from all-season Highway 955





# DESIGNED FOR SUSTAINABLE MINING



## LOW RISK

1,000 TPD processing facility & surface Tailings Management Facility (TMF) designed to be high efficiency, small footprint

## LOW IMPACT

Close proximity to highway means little on site road construction; low impact on fauna and flora

## CLEAN ORE

In contrast to most Athabasca Basin deposits, mineralization at PLS has extremely low levels of contaminants

## WASTE ROCK RETURN

Ramp access & long-haul open stoping means waste rock can be returned underground



# COLLABORATIVE, SUPPORTIVE DEVELOPMENT

*Fission Uranium continues to strengthen its social license with all rights holders and stakeholders by collaborating on the shared goals of environmental and cultural protection, and economic prosperity.*

**Holistic Environmental & Social Approach:** Development strategy integrates local, traditional, generational knowledge with western techniques.

**Collaborative Site Work:** Fission has prioritized local contractors and workers from the start of work at PLS in 2011.

**Community investment strategy:** As part of Fission's goal of being a supportive member of the community, the company invests in a range of locally-run educational, community development, cultural initiatives.





# LOCAL & PROVINCIAL ECONOMIC IMPACT

## ECONOMIC BENEFITS TO DATE

Local communities provide a range of services to Fission, including camp management, catering, logistics, security, vehicle and equipment rental, technicians, and others.

## FUTURE NEW EMPLOYMENT

The completed Triple R mine will employ an estimated 325<sup>1</sup> staff during production and require a wide range of services from local contractors.

## TRAINING AND CAREERS

Local staff will be prioritized and provided with training programs and career development.

## PROVINCIAL AND FEDERAL ECONOMIC BENEFITS

Will generate an estimated ~\$1.3B<sup>2</sup> in Provincial royalties and \$992M<sup>2</sup> in Federal taxes during the current 10-year mine life.



1. As per Jan, 2023 Feasibility Study  
2. As per Jan, 2023 Feasibility Study based on \$65/lb U3O8



# THE MOST EXPERIENCED URANIUM TEAM IN THE BASIN

## Development



### Gary Haywood, P.Eng

*VP Project Development*

35 years of mine engineering, operations, and team leadership. Formerly with Cameco as senior mine engineer (Eagle Point), mine superintendent and general manager (McArthur River mine)



### Jeff Pryznyk, Engineering Licensee, A.Sc.T

*Environmental Manager*

15+ years of environmental and regulatory affairs management for mining, most of which for uranium companies, including Cameco, during construction and production.



### Thomas Bayer, CRSP

*Safety, Health and Training Manager*

30+ years of radiation, health, safety and training in the uranium sector. Direct operations incl. safety management, radiation protection, regulatory and quality management, risk assessment, mine rescue and emergency response. Senior roles incl. Cameco, Orano.



### Neil Chambers, P.Eng.

*Mine Engineering Manager*

10+ years in mine design, planning and scheduling. Long hole open stoping, mechanised cut and fill specialist. Extensive operations experience in mine engineering, department lead, ventilation, ground control, drilling, blasting and remediation.



### Ryan Frey

*Mineral Processing Manager*

20 years in mining sector incl. hydrometallurgy, environmental, process development, commissioning, waste processing & wastewater management. Management roles with Orano.



### Richard Elkington

*Operations Manager*

30+ years in security, logistics and supply chain management incl. work in the Middle East, Africa, UK and Canada. Remote logistics and operations expert with a focus on critical infrastructure, crisis management, and business continuity.



### Amit Majumder, P.Eng., PMP

*Engineering Project Manager*

20+ years in mineral processing, metallurgical plant, and underground mine design, construction supervision and commissioning. Former project engineering and mechanical engineering lead with Orano at McClean Lake mill.



### Eric Sylvestre

*Community Liaison Coordinator*

20 years of First Nation political experience in Saskatchewan, incl. economic development, band management and leadership. Industry experience with land and resource management, environmental stewardship and traditional territory agreements.



### Mark Wittrup, MSc., P.Eng., P.Geo., CMC

*Regulatory and Environmental Permitting Senior Advisor*

40+ years in uranium. Environmental and regulatory expert incl. project lead and lead author for McArthur River EIS and licensing, and Assistant Deputy Minister, Environmental Protection and Audit, with Saskatchewan Ministry of Environment.

## Exploration



### Kanan Sarioglu, P. Geo

*VP Project Exploration*

One of the uranium sector's leading exploration specialists with 15+ years of experience and multiple uranium discoveries under his belt.



### James Haley, P. Geo

*Senior Geologist*

Highly experienced exploration geologist with a particular focus on interpreting and understanding mineralization controls to facilitate discoveries.





# FISSION EXPLORATION STRATEGY

**“FISSION’S EXPLORATION TEAM HAS DELIVERED MULTIPLE, MAJOR URANIUM DISCOVERIES IN THE BASIN.**

**IN 2024, OUR EXPLORATION DIVISION WILL BEGIN THE HUNT FOR THE NEXT BIG DISCOVERY AT PLS.”**

ROSS McELROY, PRESIDENT & CEO OF FISSION URANIUM



Exploration & Mine Geology Team led by:

Kanan Sarioglu, *VP Exploration*  
James Haley, *Senior Geologist*



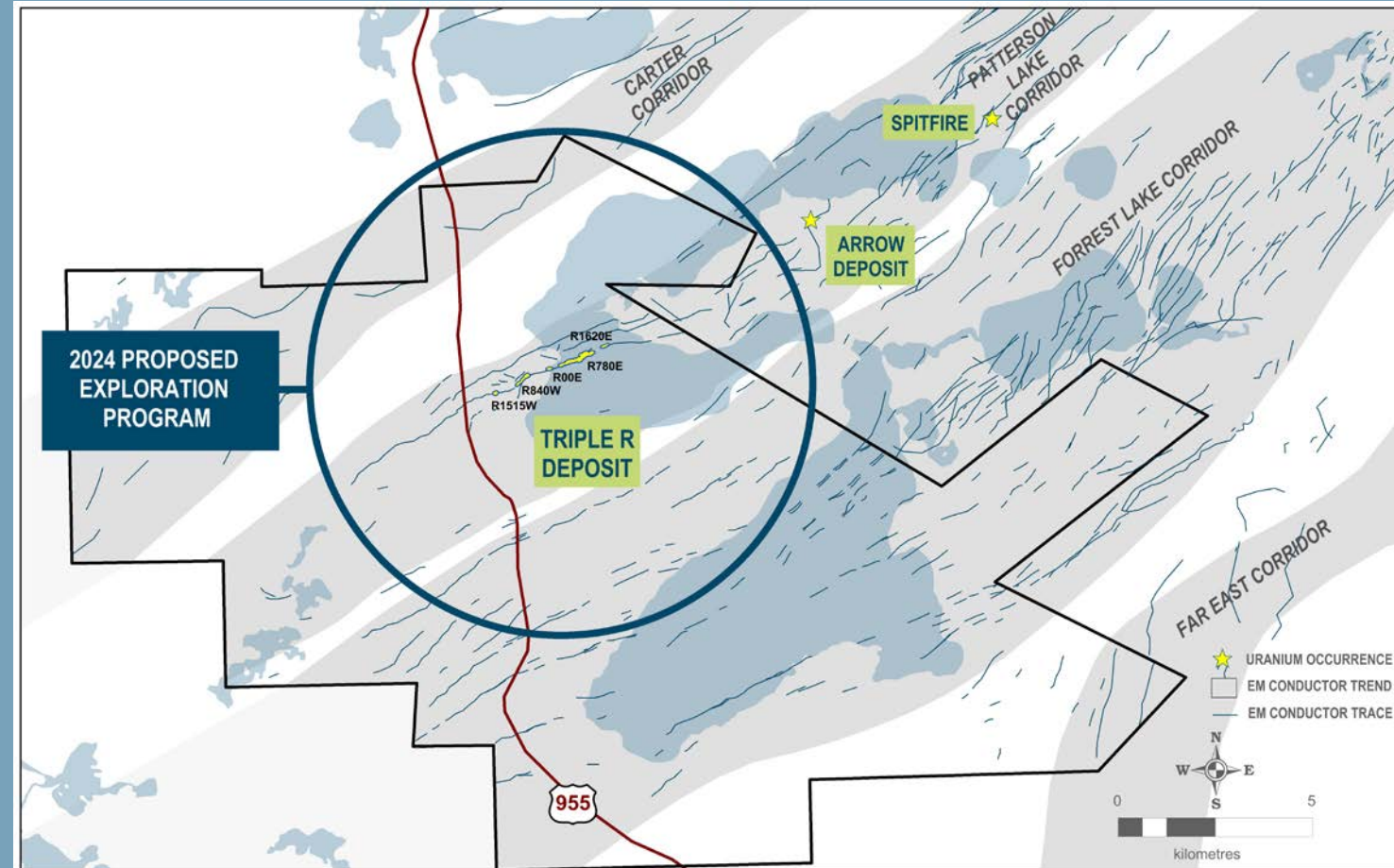
# 2024 EXPLORATION DRILLING: UNLOCKING FURTHER SHAREHOLDER VALUE

## NEAR MINE EXPLORATION

- Step out drilling from the high-grade R1515W zone
- Conversion of Inferred resource to Indicated for inclusion in mine plan

## REGIONAL TARGET EXPLORATION:

- Drill priority targets on parallel conductor to the Triple R deposit
- Drill priority targets on conductors on trend with NexGen's Arrow deposit

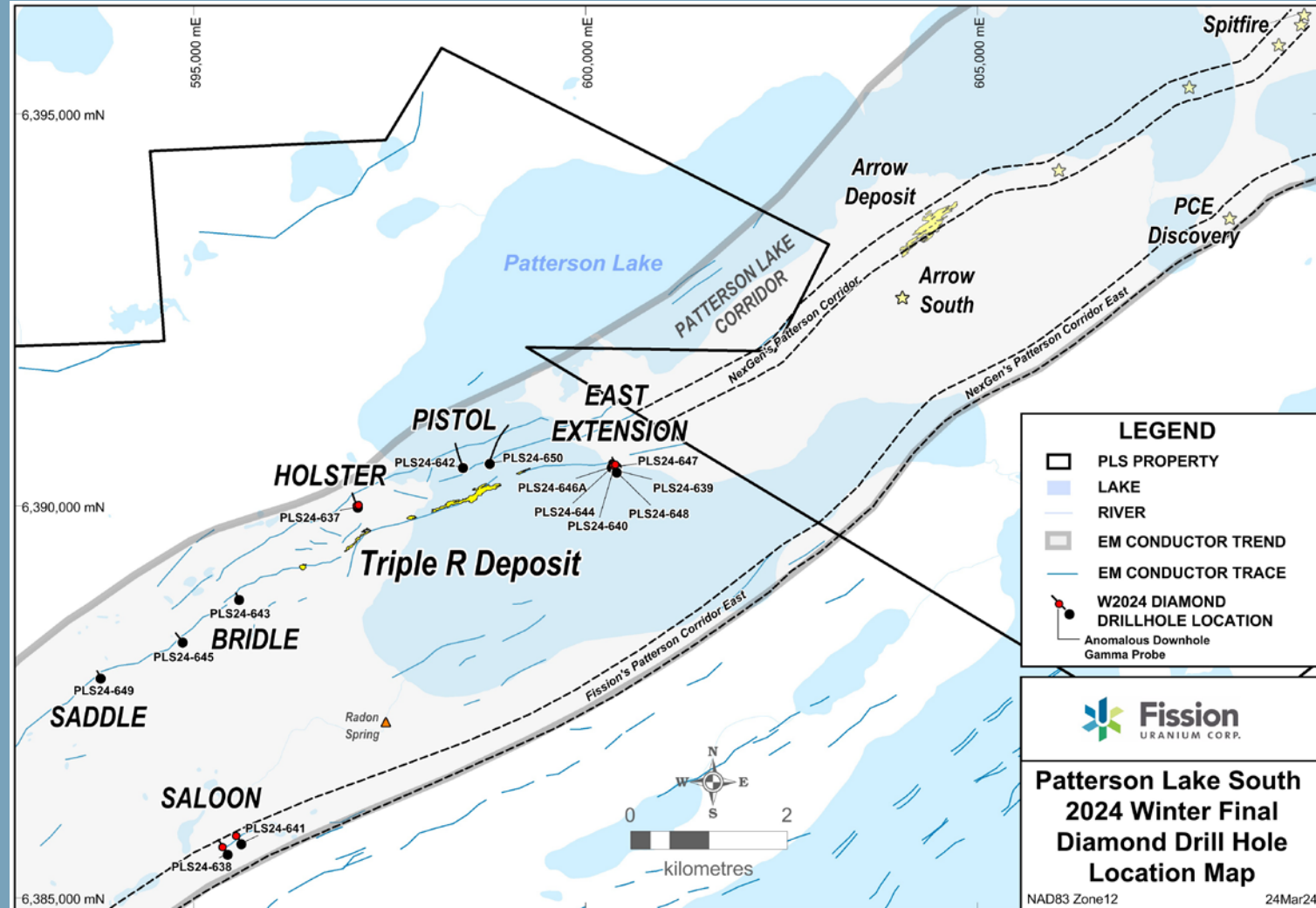




# 2024 EXPLORATION PROGRAM IDENTIFIES NEW, HIGHLY PROSPECTIVE AREAS

## DRILLING HIGHLIGHTS

- Both holes at the Saloon target were deemed highly prospective particularly considering they are west along trend of the recent “PCE” high-grade discovery
- All 7 holes at the Far East target hit anomalous features considered prospective and proximal to the presence of nearby uranium mineralization, including 4 holes with anomalous radioactivity
- Highly prospective geology was encountered at the Pistol and Saddle target areas





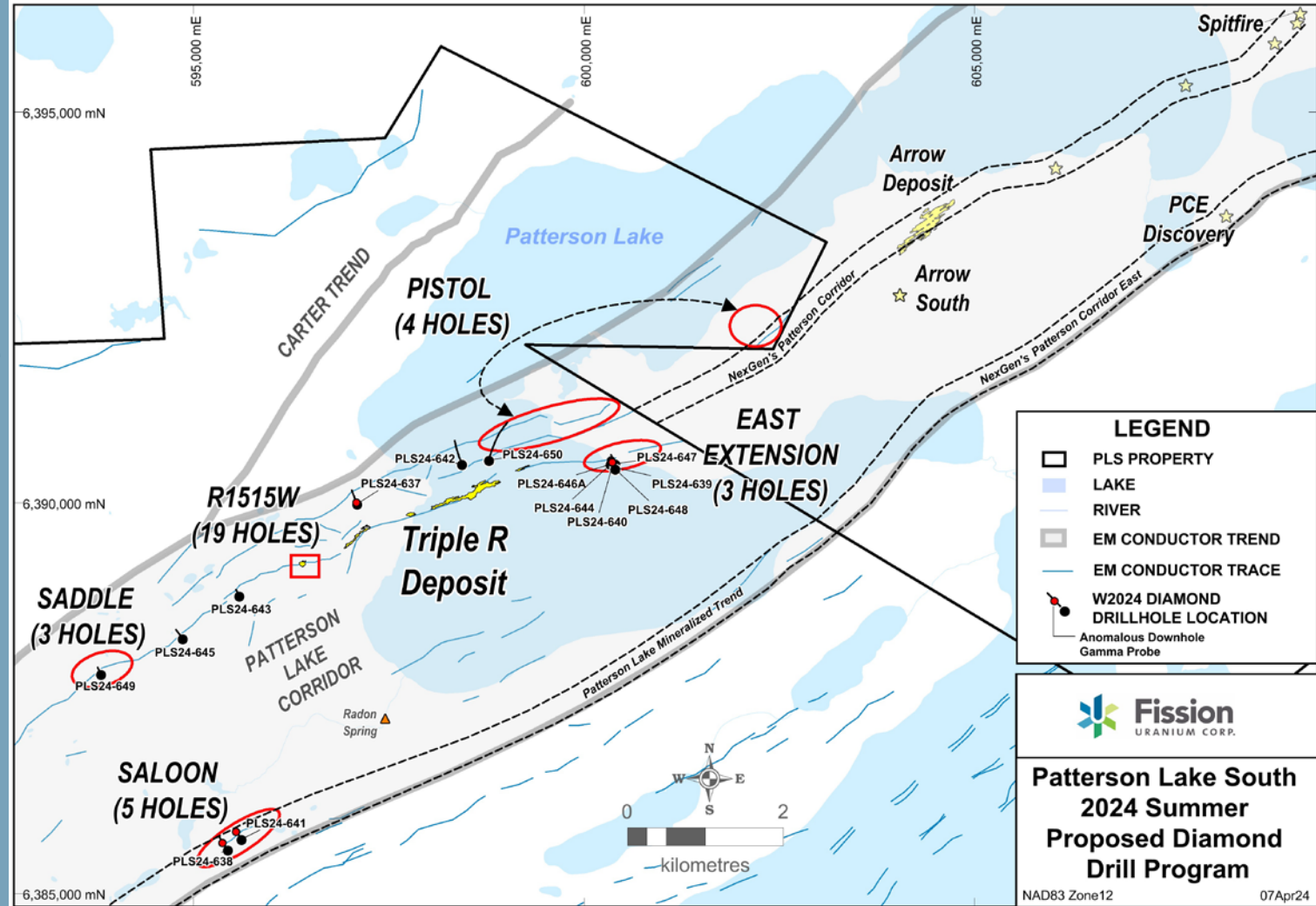
# REGIONAL TARGETS AND RESOURCE UPGRADE PART OF 2024 DRILL PROGRAM

## REGIONAL TARGETS

- Follow up to a very encouraging 2024 Winter Regional Drill Program that identified new and highly prospective areas.

## RESOURCE UPGRADE

- Step out drilling from the high-grade R1515W zone
- Conversion of Inferred resource to Indicated for inclusion in mine plan







# CORPORATE INFORMATION

## CAPITAL STRUCTURE

Share Price (as of April 5, 2024)	C\$1.06
52 Week Low / High	C\$0.54 / C\$1.33
Basic Shares Outstanding	834.5M
Options	73.7M
Warrants	20.9M
Fully Diluted Shares Outstanding	929.1M
Market Capitalization (Basic as of April 5, 2024)	Approx. C\$884.6M
Cash & ST Investments (as of March 31, 2024)	Approx. C\$139.5M

## SHAREHOLDERS



## RESEARCH COVERAGE

FIRM	ANALYST	COUNTRY
H.C. Wainwright	Heiko Ihle	USA
SCP Resource Finance	Justin Chan	England
BMO Capital Markets	Alex Pearce	England
Ocean Wall	Ben Finegold	England
Canaccord Genuity Capital Markets	Katie Lachapelle	Canada
Eight Capital	Puneet Singh	Canada
Cantor Fitzgerald	Mike Kozak	Canada
Haywood Securities	Marcus Giannini	Canada
Red Cloud	David Talbot	Canada
Paradigm Capital	Gordon Lawson	Canada





# AWARD WINNING COMPANY LEADERSHIP

## MANAGEMENT



### ROSS MCELROY, P GEOL.

*President and Chief Executive Officer, Director*

- Professional geologist of 35 years' exploration, development and mining experience
- Formerly with Cameco, Areva, BHP Billiton
- Significant role in 4 major uranium discoveries in Athabasca Basin, incl. PLS
- PDAC 'Bill Dennis Award for Exploration Success', Northern Miner 'Person of the Year'



### CHRIS SAMMARTINO, CPA

*Chief Financial Officer*

- Chartered Professional Accountant
- Over 20 years of experience in the mining and junior mining industries.

## DIRECTORS

### DARIAN YIP

*(Non-Executive Chairman)*

### FRANK ESTERGAARD

*(Independent)*

### WILLIAM MARSH

*(Independent)*

### FELIX WANG

*(Independent)*

### ROB CHANG

*(Independent)*

### BEATRIZ ORRANTIA

*(Independent)*

### ROSS MCELROY





# THANK YOU

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