



**Fission**  
URANIUM CORP.

**Management's Discussion & Analysis**

**Fission Uranium Corp.**

**For the Nine Month Period Ended  
September 30, 2022**

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## **Fission Uranium Corp.**

Management's Discussion and Analysis  
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(Expressed in Canadian dollars, unless otherwise noted)

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### **Introduction**

The following Management's Discussion and Analysis ("MD&A"), prepared as of November 11, 2022, should be read in conjunction with the unaudited condensed interim financial statements and accompanying notes of Fission Uranium Corp. (the "Company" or "Fission Uranium") for the nine month period ended September 30, 2022. The reader should also refer to the audited financial statements for the year ended December 31, 2021.

The Company's condensed interim financial statements are unaudited and have been prepared in accordance with International Financial Reporting Standards, as issued by the International Accounting Standards Board ("IFRS"), applicable to the preparation of interim financial statements, IAS 34, Interim Financial Reporting ("IAS 34") and do not contain all of the information required for annual financial statements.

Additional information related to the Company, including the most recent Annual Information Form ("AIF"), is available for viewing on SEDAR at [www.sedar.com](http://www.sedar.com). Further information that has also not been incorporated into this MD&A, including news releases and property maps, are available on the Company's website at [www.fissionuranium.com](http://www.fissionuranium.com), or by requesting further information from the Company's head office located at 700 – 1620 Dickson Ave., Kelowna, British Columbia, Canada, V1Y 9Y2.

### **Forward looking statements**

Statements in this report that are forward looking could involve known and unknown risks and uncertainties, which could cause actual results to vary considerably from these statements. Should one or more of these unknown risks and uncertainties, or those described under the headings "Risk Factors" in the Company's AIF, which can be found on the Company's SEDAR profile at [www.sedar.com](http://www.sedar.com), and those set forth in this MD&A under the heading "Cautionary notes regarding forward-looking statements" and "Risks and uncertainties" materialize, or should underlying assumptions prove incorrect, then actual results may vary materially from those described in forward-looking statements.

### **Scientific and technical disclosure**

Scientific and technical information in this MD&A was reviewed and approved by Ross McElroy, P. Geol., CEO of Fission Uranium. Ross McElroy is a qualified person as defined by Canadian National Instrument 43-101 *Standards of Disclosure for Mineral Projects* ("NI 43-101").

### **Description of business**

Fission Uranium is a resource issuer specializing in uranium exploration and development in Saskatchewan's Athabasca Basin in Western Canada. The Company was incorporated on February 13, 2013 under the laws of the Canada Business Corporations Act in connection with a court approved plan of arrangement to reorganize Fission Energy Corp. Fission Uranium's common shares are listed on the Toronto Stock Exchange under the symbol "FCU", the OTCQX marketplace in the U.S. under the symbol "FCUUF" and on the Frankfurt Stock Exchange under the symbol "2FU".

The Company's primary asset is the Patterson Lake South ("PLS") project, which hosts the Triple R deposit – a large, high-grade and near-surface uranium deposit that occurs within a 3.18km mineralized trend along the Patterson Lake Conductive Corridor. The deposit has one of the largest lateral mineralized footprints of comparable deposits in the Athabasca Basin region and remains open in multiple directions. The property comprises 17 contiguous claims totaling 31,039 hectares and is located geographically in the south-west margin of Saskatchewan's Athabasca Basin, notable for hosting the highest-grade uranium deposits and operating mines in the world.

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### Corporate goals

Management firmly believes that global uranium demand is rising, driven by an ongoing nuclear reactor construction boom. Uranium sentiment, as evidenced by government investment in small nuclear reactors as well as traditional reactors, and strongly supportive political statements from countries like the US, UK, and China, is strengthening. This is a result of the rapidly growing focus on clean energy, and the continually increasing global electrical energy demand. In addition, years of low uranium prices have led to the shuttering of higher OPEX uranium operations and minimal investment in new sources of production. In 2017, the number of nuclear reactors in the combined construction, planning and proposal stages, reached the highest level in 25 years and the amount of uranium required by utilities, currently uncovered by contracts, continues to increase rapidly. The result is a tightening of the supply and demand balance. As such, management is optimistic about the long-term prospects for the uranium market and is committed to developing its Triple R deposit at PLS, while continuing to explore for additional high-grade occurrences on the property. Fission Uranium is fortunate to have its property located in the politically stable and investment friendly province of Saskatchewan, Canada. The Fraser Institute as well as a number of other similar institutions publish an annual report of mining and exploration companies and ranks geographic regions globally in an attempt to assess how mineral endowments and public policy factors, such as taxation and regulatory uncertainty, affect exploration investment. Saskatchewan is consistently rated amongst the best jurisdictions in these annual reviews for mining investment and, most recently, was rated the third best jurisdiction globally in terms of investment risk by the Mining Journal in 2021.

Continued exploration and development success over the past eight years has enabled the Company to fund its operations primarily through share equity financing in a difficult uranium sector and challenging capital market environment for mineral exploration companies.

In addition to progressing the Company's exploration and development plans, management will continue to seek strategic opportunities to add further shareholder value and appropriately monetize the PLS property and Triple R deposit for shareholders.

Specific growth plans include:

- Continuing to develop the Triple R deposit towards the feasibility stage; and
- Improving and de-risking the strong economic parameters of the Triple R deposit (as defined by the 2019 prefeasibility study) by work designed to further increase the certainty of the resource and viability of mine design in addition to expanding the overall footprint of the Triple R deposit, discovering and/or defining new mineralization.

### PLS property

Details of the Company's PLS project as of September 30, 2022 are shown below:

Property	Location	Ownership	Claims	Hectares	Stage	Carrying value
Patterson Lake South	Athabasca Basin, SK	100%	17	31,039	Feasibility	\$ 354,206,547

In January 2016, the Company executed an offtake agreement with CGN Mining Company Limited ("CGN Mining"). Under the terms of the agreement, CGN Mining will purchase 20% of annual U<sub>3</sub>O<sub>8</sub> production with an option to purchase up to an additional 15% U<sub>3</sub>O<sub>8</sub> production from the PLS property, after commencement of commercial production.

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### **Summary of significant accomplishments for the three month period ended September 30, 2022 and subsequent**

On November 10, 2022, the Company announced that it entered into an Engagement and Capacity Agreement (the "Agreement") with the Birch Narrows Dene Nation ("BNDN"). Fission continues to actively develop relationships and engage with Indigenous and local communities to facilitate their involvement in the assessment of the project and its development. The Agreement creates a process for Fission and BNDN to meaningfully engage in respect of the PLS Project, and strengthens the positive, cooperative working relationship that has been established.

On November 8, 2022, the Company announced further assay results from the summer 2021 "metallurgical & geotechnical testwork" drilling on the R840W zone. Assays confirm that all 7 holes intersected wide intervals of mineralization, with 6 holes returning strong, high-grade intervals. Of particular note, hole PLS21-MET-004 (line 615W), intersected a continuous interval measuring 34.0m @ 19.12% U<sub>3</sub>O<sub>8</sub>, including 26.0m @ 24.59% U<sub>3</sub>O<sub>8</sub>. With a total composite grade x thickness value "GT" of 650.7, this positions it as one of the strongest holes drilled to date at the PLS project.

On September 12, 2022, the Company announced results of an updated independent resource estimate for the Triple R deposit at its PLS property. Total Indicated tonnes have increased by ~21.3% (~472,000 tonnes) compared to the previous Mineral Resource (dated September 19, 2019), with an associated increase of approximately 12.3% in contained U<sub>3</sub>O<sub>8</sub> and a minor decrease in grade from 2.10% U<sub>3</sub>O<sub>8</sub> to 1.94% U<sub>3</sub>O<sub>8</sub>. The new, larger indicated resource is primarily due to the successful infill drilling programs on the R780E and R840W zones from 2019 to 2021 and will be fundamental to the Feasibility Study (FS), including life of mine (LOM) calculations and processing schedule.

On July 18, 2022, the Company announced that it entered into an engagement and communication agreement (the "Agreement") with the Buffalo River Dene Nation ("BRDN").

The Agreement formalizes a process for Fission and BRDN to meaningfully engage in respect of the PLS Project, and strengthens the positive, cooperative working relationship that has been established. Fission and BRDN will jointly develop mutually acceptable engagement processes to enhance information sharing, to facilitate BRDN participation in discussions, planning, assessment, and review activities, and to support BRDN in reviewing and providing feedback on relevant aspects of the Project. Fission and BRDN will also work together to identify any potential impacts of the Project on the Indigenous Rights, culture, traditional and land resource use, and community interests of BRDN and explore options to mitigate those impacts. Additionally, Fission and BRDN will work to identify and effectively utilize traditional knowledge to enhance the Project.

### **Winter 2022 Drill Program**

In April 2022, the Company announced the geotechnical drill program, a continuation of field work as part of the Feasibility Study of the Triple R deposit, was successfully completed. The work focused on geotechnical drilling for the R780E Zone as well as similar geotechnical drilling on the R00E and R840W zones. In addition, first pass geotechnical drilling was conducted for the R1515W zone, to prepare for possible, later inclusion of the R1515W zone into the development plans. A total of six HQ large diameter geotechnical holes were drilled using a combination of sonic and core drilling techniques. In parallel with the technical feasibility work, the company continues to collect further field data and conduct long term monitoring for the baseline environmental survey as well as advance its efforts with discussions with impacted Indigenous rightsholders and local stakeholders.

Winter Program Highlights include:

- 6 geotechnical drillholes totaling 1044.2 meters:
  - R780E Zone – 3 crown pillar and rock mechanics geotechnical drill holes
  - R00E Zone – 1 crown pillar and rock mechanics geotechnical drill hole
  - R840W Zone – 1 ventilation shaft rock mechanics geotechnical drill hole
  - R1515W Zone – 1 crown pillar and rock mechanics geotechnical drill hole
- A pumping well pulsed test was performed at the R840 zone from a deep pumping well drilled during Summer 2021

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### Summer 2021 Drill Program Results

The R840W zone is the 2<sup>nd</sup> largest of five high-grade zones that make up the Triple R deposit. Although the R840W has been used in the global resource estimate for the Triple R deposit, it was not considered in the economic analysis of the Prefeasibility Study because it was primarily classified as an Inferred resource.

On January 31, 2022, the Company announced assay results from the R840W zone drill program. All 25 holes hit mineralization, with nineteen intercepting significant intervals of high-grade mineralization. The assay results provide laboratory certified analytical valuation of the concentration of U<sub>3</sub>O<sub>8</sub> in samples, which are referred to as "mineralized" as previously disclosed in a news release. Assay results are considered the definitive assessment of concentration of measured elements in a sample. The goal of the drill program was to upgrade the majority of the R840W zone from its majority Inferred resource classification to Indicated. This would be achieved by decreasing the spacing between drill hole mineralized intercepts to a distance of ~15m to 20m (horizontal and vertical) required for conversion of the resource to Indicated. The assay results will be used for modeling of the zones to be used in a revised resource estimate. If assay and modeling results are positive and sufficient, then the R840W has the potential to be incorporated into the Feasibility Study.

The drill program had a 100% hit ratio, whereby all 25 holes intersected mineralized intervals above the minimum cut-off criteria of >0.5 meters at 0.05% U<sub>3</sub>O<sub>8</sub> and a maximum internal dilution of 2.0m. Twenty of the holes intersected high-grade intercepts, which is defined as composited intervals exceeding 1% U<sub>3</sub>O<sub>8</sub>.

#### R840W Zone Metallurgical Holes

Four large diameter HQ holes were collared and drilled vertically spaced over 180m of strike length to collect representative mineralized rock samples to be used for metallurgical testwork. The testwork is to verify the process required to extract U<sub>3</sub>O<sub>8</sub> efficiently and economically and understand the grade variability and mineralogy impact on processing factors such as recovery of the R840W zone compared to the R780E zone. At the completion of the analysis for metallurgical testwork, the 4 metallurgical holes were sent for assay analysis to SRC Geoanalytical Laboratories.

On November 8, 2022, the Company announced assay results from the summer 2021 "metallurgical & geotechnical testwork" drilling on the R840W zone. Four metallurgical holes and three geotechnical holes were completed as part of the Phase 1 feasibility study field work. Assays confirm that all 7 holes intersected wide intervals of mineralization, with 6 holes returning strong, high-grade intervals. Of particular note, hole PLS21-MET-004 (line 615W), intersected a continuous interval measuring 34.0m @ 19.12% U<sub>3</sub>O<sub>8</sub>, including 26.0m @ 24.59% U<sub>3</sub>O<sub>8</sub>. With a total composite grade x thickness value "GT" of 650.7, this positions it as one of the strongest holes drilled to date at the PLS project.

#### Drilling Highlights:

- All outstanding drill assay results for feasibility study are complete
- A total of 6 out of 7 holes intersected high-grade mineralization
- Hole PLS21-MET-004 is one of the best holes ever drilled at the PLS project

PLS21-MET-004 (line 615W) Total composite GT value of 650.7

- 34.0m continuous mineralization @ 19.12% U<sub>3</sub>O<sub>8</sub> (between 98.5m to 132.5m), including:
  - 26.0m @ 24.59% U<sub>3</sub>O<sub>8</sub> (between 102.5m to 128.5m)

PLS21-MET-003 (line 675W)

- 47.5m continuous mineralization @ 2.55% U<sub>3</sub>O<sub>8</sub> (between 99.0m to 146.5m), including:
  - 9.0m @ 11.77% U<sub>3</sub>O<sub>8</sub> (between 131.0m to 140.0m)

PLS21-MET-002 (line 765W)

- 65.5m continuous mineralization @ 1.21% U<sub>3</sub>O<sub>8</sub> (between 106.0m to 171.5m), including:
  - 4.0m @ 4.60% U<sub>3</sub>O<sub>8</sub> (between 135.0m to 139.0m); and
  - 4.5m @ 9.36% U<sub>3</sub>O<sub>8</sub> (between 165.5m to 170.0m)

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On September 12, 2022, the Company announced results of an updated independent resource estimate for the Triple R deposit at its PLS property, which included the incorporation of drill assay results from the 2021 drilling on the R780E and R840W zones. Total Indicated tonnes have increased by ~21.3% (~472,000 tonnes) compared to the previous Mineral Resource (dated September 19, 2019), with an associated increase of approximately 12.3% in contained U<sub>3</sub>O<sub>8</sub> and a minor decrease in grade from 2.10% U<sub>3</sub>O<sub>8</sub> to 1.94% U<sub>3</sub>O<sub>8</sub>, using a cut-off grade of 0.25% U<sub>3</sub>O<sub>8</sub>. The new, larger indicated resource is primarily due to the successful infill drilling programs on the R780E and R840W zones from 2019 to 2021 and will be fundamental to the Feasibility Study (FS), including life of mine (LOM) calculations and processing schedule.

### Summary of Triple R Mineral Resources by Zone – May 17, 2022

Classification	Zone	Tonnes	Grade (%U <sub>3</sub> O <sub>8</sub> )	Grade (Au g/t)	Contained Metal	
					U <sub>3</sub> O <sub>8</sub> (lb)	Gold (oz)
<b>Indicated</b>						
	R780E_HG	162,000	16.91	2.73	60,400,000	14,200
	R780E_MZ	1,578,000	0.79	0.48	27,500,000	24,100
	R780E_OTHER	429,000	0.95	0.62	9,000,000	8,600
	R000E	98,000	1.50	0.15	3,200,000	500
	R1620E	42,000	1.98	0.19	1,900,000	300
	R840W	303,000	1.35	0.36	9,000,000	3,600
	R840W_HG	9,000	11.32	2.38	2,200,000	700
	R1515W	67,000	1.15	0.38	1,700,000	800
<b>Indicated Total</b>		<b>2,688,000</b>	<b>1.94</b>	<b>0.61</b>	<b>114,900,000</b>	<b>52,700</b>
<b>Inferred</b>						
	R780E_HG	400	11.8	5.73	100,000	100
	R780E_MZ	16,000	0.33	0.29	100,000	200
	R780E_OTHER	254,000	0.60	0.46	3,400,000	3,800
	R000E	9,000	3.83	0.79	700,000	200
	R1620E	59,000	3.55	0.48	4,600,000	900
	R840W	63,000	1.10	0.37	1,500,000	700
	R1515W	234,000	0.96	0.42	5,000,000	3,100
<b>Inferred Total</b>		<b>635,000</b>	<b>1.10</b>	<b>0.44</b>	<b>15,400,000</b>	<b>9,000</b>

#### Notes:

1. CIM (2014) definitions were followed for Mineral Resources.
1. Mineral Resources are reported at a cut-off grade of 0.25% U<sub>3</sub>O<sub>8</sub>.
2. The cut-off grades are based on price of US\$50/lb U<sub>3</sub>O<sub>8</sub> and an exchange rate of US\$0.75/C\$1.00.
3. A minimum mining width of 1.0 m was used.
4. Mineral Resources are inclusive of Mineral Reserves.
5. Numbers may not add due to rounding.



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### Resource Estimation Methodology

The updated Mineral Resource estimate was completed by SLR Consulting (Canada) Ltd. "SLR" – a recognized independent consulting firm with significant resource estimation experience in high-grade Athabasca uranium deposits. Of the total 838 drill holes drilled on the PLS Property, 696 drill holes totaling 213,969 m of drilling were used in the Mineral Resource estimate. The wireframe models representing the mineralized zones are intersected in 436 of 686 drill holes.

As part of advanced stage studies for the Triple R deposit, Fission Uranium resumed infill drilling programs at R780E and R840W with the intention of upgrading certain high priority areas from Inferred Mineral Resources to Indicated Mineral Resources. Of the 175 drill holes completed since the 2019 estimate, 46 infill exploration and three geotechnical drill holes, totalling 14,304 m, targeted the high grade (HG) and main low grade (LG) domains in the R780E and R840W zones (24 drill holes totalling 8,180 m and 25 drill holes totalling 6,124 m, respectively) with the objective to upgrade Inferred Mineral Resources to the Indicated classification, and improve the geotechnical understanding of the zones.

SLR interpreted and constructed low grade wireframe models using a nominal COG of 0.05%  $U_3O_8$  and a minimum core length of one metre. SLR considers the selection of 0.05%  $U_3O_8$  to be appropriate for construction of mineralized wireframe outlines, as this value reflects the lowest COG that is expected to be applied for reporting of the Mineral Resources in an underground operating scenario and is consistent with other known deposits in the Athabasca Basin.

Sample intervals with assay results less than the nominated cut-off grade were included within the mineralized wireframes if the core length was less than two metres or allowed for modelling of grade continuity. Wireframes of the High Grade (HG) domain were created using a grade intercept limit equal to or greater than one metre with a minimum grade of 5%  $U_3O_8$ , although lower grades were incorporated in places to maintain continuity and to meet a minimum thickness of one metre.

SLR built the wireframe models using 3D polylines on east looking vertical sections spaced 15 m apart. Infill polylines were added to accommodate for irregular geometries. Polylines were "snapped" to assay intervals along the drill hole traces such that the sectional interpretations "wobbled" in 3D space. Polylines were joined together in 3D using tie lines and the continuity was checked using a longitudinal section and level plans. Extension distance for the mineralized wireframes was half-way to the next hole, or approximately 25 m vertically and horizontally past the last drill intercept.

Grade interpolations for  $U_3O_8$  and gold were carried out using ID3 in a single pass with a minimum of two to a maximum of seven composites per block estimate. The search ellipse orientation varied slightly by domain. Hard boundaries were used to limit the use of composites between domains. Most search ellipse dimensions were 50 m by 50 m by 10 m for a 5:5:1 anisotropic ratio.

To reduce the influence of high grade composites, grades greater than a designated threshold level for some domains were restricted to a search ellipse dimension of 25 m by 25 m by 5 m (high yield restriction). The threshold grade levels were chosen from the basic statistics and from visual inspection of the apparent continuity of very high grades within each domain, which indicated the need to limit their influence to approximately half the distance of the main search. Estimated block model grades are based on chemical assays only.

Block densities were estimated from the density measurements using inverse distance cubed (ID3) and a similar search strategy as used for uranium grade. Hard boundaries were used between domains. The Triple R resource database includes 17,509 density measurements of which 15,920 were used in the resource estimation.

At a COG of 0.25%  $U_3O_8$  for Mineral Resources potentially mineable by underground methods, Indicated Mineral Resources total 2.69 Mt at an average grade of 1.94%  $U_3O_8$  for a total of 114.9 Mlb  $U_3O_8$ . Inferred Mineral Resources total 0.64 Mt at an average grade of 1.10%  $U_3O_8$  for a total of 15.4 Mlb  $U_3O_8$ . Estimated grades are based on chemical assays only. Gold grades were also estimated and average 0.61 g/t for the Indicated Mineral Resources and 0.44 g/t for the Inferred Mineral Resources. Mineral Resources are inclusive of Mineral Reserves.

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The zones are those areas traditionally referred to by Fission Uranium in press releases and on its website and are generally defined by differences in location with respect to local grid easting. The R780E\_HG domain consists of several lenses within the R780E\_MZ and, when combined, the two zones account for approximately 68% of the total resources at Triple R.

Previously reported Inferred mineralization totaling 1.24 Mlb U<sub>3</sub>O<sub>8</sub> (<1.0% of total resource) contained within the Halo domain (901) have been excluded from the current May 17, 2022, Mineral Resources estimate as this zone does not meet CIM (2014) definition criteria for Reasonable Prospects for Eventual Economic Extraction (RPEEE) based on an underground mining only scenario.

### **Feasibility Study**

In 2019, the Company completed first a "hybrid open-pit and underground" development scenario and followed up with an "underground-only" prefeasibility study "PFS". While both mining studies showed positive outcomes, the results of the "underground-only" study showed stronger merits in most measurable criteria. The report titled "Technical Report on the Prefeasibility Study on the Patterson Lake South Property Using Underground Mining Methods, Northern Saskatchewan, Canada" dated November 7, 2019 with an Effective Date of September 19, 2019 is the current technical report (the "U/G PFS").

The U/G PFS recommended that the Company advance the PLS project to a feasibility study which the Company began field work on during June 2021.

In June 2021, the Company announced the commencement of its Feasibility Study ("FS" or the "Study") for the PLS project. The feasibility work kicked-off with Phase 1, comprised of extensive data collection using drilling and other fieldwork. The FS follows the results of the Company's Pre-Feasibility Study detailing an underground-only mining scenario, which outlined the potential for PLS to be one of the lowest operating cost uranium mines in the world. Phase 1 commenced during June 2021 with completion expected during Q3, 2022. Concurrent with Phase 1 field work, a 25-hole core drill program targeting the R840W Zone, was completed in August 2021. The R840W drill program was aimed to upgrade the majority of the R840W resource to Indicated category, which then would have the potential to be included in the resource model used for the FS.

In September 2021, the Company announced it had appointed Tetra Tech Canada as the lead consultant for the feasibility study.

The FS will comprise two Phases: Data collection and assessment (Phase 1) and Design (Phase 2). Phase 2 will use the data collected from Phase 1 to further refine the design of the underground mine, surface infrastructure plans and Tailings Management Facility to be incorporated into the Feasibility Study.

For the Phase 1 program, the Company has been focused on optimizing the site surface layout and has made adjustments to the location of the ramp access, waste stockpiles and processing plant.

#### **Phase 1 Activity:**

- Ramp Access Assessment
- Vent Shaft Assessment
- Tailings Management Facility "TMF" Assessment
- Metallurgical Assessment
- Infrastructure Foundation Geotechnical Assessment
- Mine Geotechnical Assessment for R780E and R840W Zones
- Mine Hydrogeological Assessment
- Mine Geochemical Assessment



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### **Phase 2 Activity:**

- Assessment of the technical elements of the development and mining operations. This includes geotechnical, hydrogeological, metallurgical, geological and mine engineering aspects of the proposed PLS Project; building on the previous work completed at the PFS level.
- Assessment of the financial viability of the project in greater detail than the PFS. This includes updating the financial model for capital and operating costs, and conducting trade-off studies to determine critical project elements such as power supply, mine access and metal recovery.
- Assessment of risks such as financial, environmental, health and safety aspects of the project.

### **Environmental Assessment**

The Environmental Assessment ("EA") phase has as its purpose to ready the project for eventual environmental impact assessment ("EIA"). The EA phase is triggered at the time the Saskatchewan Ministry of Environment "MOE" accepts the submittal of the Project Description (Technical Proposal). On December 1, 2021, the Company announced that the "MOE" had formally accepted the recently submitted Project Description ("Technical Proposal") for the PLS uranium project (the "Project") in Saskatchewan, Canada. With this acceptance, Fission has now commenced the "EA" as per the requirements of The Saskatchewan Environmental Assessment Act. Fission has requested approval under Section 15 of the Act and is looking for a determination from the Saskatchewan Minister of Environment that the Project is a Development. The result of this is that Fission will be required to produce an "EIA" for the Project. In support of this, Fission has also submitted a draft Terms of Reference that will be finalized by the province in consultation with other stakeholders. The final Terms of Reference will guide Fission's EA development.

While the proposed project does not formally trigger an Impact Assessment (IA) under the Canada Impact Assessment Act, 2019, there will be close coordination required between the province and the Canadian Nuclear Safety Commission (CNSC), Canada's life cycle nuclear regulator, to ensure that the EA includes components that will support the environmental aspects of CNSC licensing. Fission is currently working with CNSC to explore the most appropriate time for submission of an Initial License Application.

### **Engagement Activities**

As part of its progress within the Environmental Assessment phase for the PLS project in Saskatchewan, Canada, the Company is continuing to build mutually respectful, transparent and productive relationships with all local rightsholders and stakeholders. This includes the recently signed Engagement and Capacity agreements with the Birch Narrows Dene Nation ("BNDN"), the Buffalo River Dene Nation ("BRDN"), Ya'thi Néné Lands and Resources Office ("YNLR") and the Clearwater River Dene Nation ("CRDN"). These agreements strengthen the positive working relationship and establish a long-term foundation for Fission and its Indigenous rightsholders.

To achieve the outcomes of these processes in a meaningful and collaborative way, Fission and its Indigenous rightsholders will continue to establish open lines of communication, and connect regularly by phone, email, and/or meeting.

As part of the agreements, Fission is funding ongoing engagement work by CRDN, YNLR, BRDN and BNDN. These studies will inform CRDN, YNLR, BRDN and BNDN, and will be incorporated into the ongoing assessment of PLS.

In the fall of 2021, Fission shared a summary of its engagement approach, which can be found on the new '[Engagement](#)' page of the Fission website. The approach has been designed to reflect feedback that Fission receives from rightsholders, related to their engagement expectations, capacity needs, and preferred timelines. The engagement approach guides how Fission shares information with rightsholders and stakeholders, how information is collected and shared with Fission, and how that information or feedback is used to inform key, iterative phases of the environmental impact assessment process.

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### **PLS mineralized trend & Triple R deposit summary**

Uranium mineralization of the Triple R deposit at PLS occurs within the Patterson Lake Conductive Corridor and has been traced by core drilling over ~3.18km of east-west strike length in five separated mineralized "zones" which collectively make up the Triple R deposit. From west to east, these zones are: R1515W, R840W, R00E, R780E and R1620E. Through successful exploration programs completed to date, Triple R has evolved into a large, near surface, basement hosted, structurally controlled high-grade uranium deposit. The discovery hole was announced on November 5, 2012 with drill hole PLS12-022, from what is now referred to as the R00E zone.

The R1515W, R840W and R00E zones make up the western region of the Triple R deposit and are located on land, where overburden thickness is generally between 55m to 100m. R1515W is the western-most of the zones and is drill defined to ~90m in strike-length, ~68m across strike and ~220m vertical and where mineralization remains open in several directions. R840W is located ~515m to the east along strike of R1515W and has a drill defined strike length of ~430m. R00E is located ~485m to the east along strike of R840W and is drill defined to ~115m in strike length. The R780E zone and R1620E zones make up the eastern region of the Triple R deposit. Both zones are located beneath Patterson Lake where water depth is generally less than six metres and overburden thickness is generally about 50m. R780E is located ~225m to the east of R00E and has a drill defined strike length of ~945m. R1620E is located ~210m along strike to the east of R780E, and is drill defined to ~185m in strike length.

Mineralization along the Patterson Lake Corridor trend remains prospective along strike in both the western and eastern directions. Basement rocks within the mineralized trend are identified primarily as mafic volcanic rocks with varying degrees of alteration. Mineralization is both located within and associated with mafic volcanic intrusives with varying degrees of silicification, metasomatic mineral assemblages and hydrothermal graphite. The graphitic sequences are associated with the PL-3B basement Electro-Magnetic (EM) conductor. The Triple R deposit remains open in several directions. High-priority exploration targets remain further west on-trend, towards the high-grade boulder field, as well as elsewhere on the PLS property.

In November 2019, the Company filed a prefeasibility study for an underground-only mining scenario conducted by Roscoe Postle Associates Inc. ("RPA"), and entitled "Pre-Feasibility Study on the Patterson Lake South Property Using Underground Mining Methods, Northern Saskatchewan, Canada" (the "U/G PFS"). The U/G PFS follows the results of an earlier PFS report outlining a hybrid mine approach using both open pit and underground techniques (the "Hybrid PFS" – SEDAR filed in May 2019). The U/G PFS highlights a substantial reduction in CAPEX and time requirements for construction of the Triple R mine due to simplified water control measures for underground mining. With the U/G PFS, access to the deposit is envisaged via a decline from land. The revised mining method eliminates the need for a system of dykes and slurry walls, dewatering and overburden removal and results in a reduction of 90% of total mine-related earth movement from the Hybrid PFS to the U/G PFS. The reduced earth movement results in reduced surface piles and overall minimized surface footprint. With a projected OPEX of just US\$7.18/lb, the U/G PFS outlines the potential for highly economic production at PLS.

While the U/G PFS only considers Indicated Resources from the R780E and R00E zones, the mine plan has been deliberately designed to easily accommodate additional material from the R1515W, R845W and R1620E zones based on potential future conversion of Inferred Resources to Indicated Resources. At the time of the PFS, the majority of mineralization at these three, on-strike, high-grade zones was currently defined as Inferred Mineral Resource classification and thus not considered for inclusion in the U/G PFS mine plan. As proven by the Company's drilling at the Triple R deposit's R00E and R780E zones and more recently on the R840W zone, Fission has shown an excellent track record of converting Inferred-category resources to Indicated-category. As a result, there is a clear path for growing the deposit, potentially leading to an increased resource as well as a longer mine-life.

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## **Fission Uranium Corp.**

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### **PLS U/G Prefeasibility Study highlights:**

#### ***Reduced Capital Costs, Low Operating Costs, and Robust Economics***

- Substantially reduced earthworks as a result of eliminating the dyke, slurry wall, dewatering, and overburden removal that was envisaged in the Hybrid PFS
- Construction timeline reduction of 1 year from 4 years (Hybrid PFS) to 3 years (U/G PFS)
- 21% reduction in capital costs from \$1.50B (Hybrid PFS) to \$1.18B (U/G PFS)
- Seven-year production life
- Average unit operating costs of US\$7.18/lb U<sub>3</sub>O<sub>8</sub>
- Economics:
  - IRR of 34% (pre-tax) / 25% (after-tax)
  - NPV of C\$1.33B (pre-tax) / C\$0.7B (after-tax) at 8% discount rate
  - Payback in 2.2 years (pre-tax) / 2.5 years (after-tax)

#### ***Demonstrated Scope for Substantial Growth***

- **Additional Zones:** The PFS mine plan has been designed specifically to accommodate all five currently defined mineral zones based on potential future conversion of Inferred Resources to Indicated Resources. These include the three high-grade, on strike zones – R1515W, R845W and R1620E – that are not yet part of Mineral Reserves.
- **Zone Expansion:** The R780E is open at depth and along plunge to the east and further opportunity exists to continue to grow the resource in those directions, potentially extending the underground mine life.
- **Mineralization Upgrade:** The PFS mine plan does not include areas of Inferred Mineral Resource in the R00E and R780E zones.

#### ***Reduced Environmental Impact***

- The U/G PFS mine plan completely eliminates the need for a ring dyke, slurry wall, dewatering, and overburden removal that was included in the Hybrid PFS.
- Recovery of reserves near the overburden and bedrock contact (the crown pillar) will utilize artificial ground freezing technology drilled remotely from shore, which eliminates any disturbances into Patterson Lake. Artificial ground freezing has been used extensively at uranium deposits in the Athabasca Basin.
- Other than a freshwater intake pump, and treated effluent discharge point, all other infrastructure related to mining at PLS is set back a minimum of 100 m from the shoreline of Patterson Lake.
- The revised mining method results in a reduction of approximately 90% of total mine-related earth movement from the Hybrid PFS to the U/G PFS (51.2Mt in the Hybrid PFS compared to 5.4 Mt in the U/G PFS), and a 58% reduction to the total disturbed area.

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### Uranium outlook

Management believes that the development of PLS presents an opportunity to increase shareholder value based on a number of factors, including but not limited to: supply/demand fundamentals, geopolitics and clean power generation. This "greening", or decarbonization, is being accelerated as countries look for ways to stimulate economic recovery in the wake of the Covid-19 pandemic and, as shown with statements from the EU and individual nations such as the United States, China and India, nuclear has a critical role to play because renewable sources of energy, alone, cannot replace fossil fuel energy. The change in government sentiment is, in turn, improving public and investor sentiment.

Uranium is well known and well proven as a thin market. After years of low prices, utilities have finally worked their way through the supply overhang. As a result, the underlying fundamentals affecting supply and demand are coming to bear. This can be seen in the rapid increases in the uranium spot price since April 2021, more than doubling from to a high of \$63.50 in April 2022. This is the first time since 2012 that uranium spot prices have risen above \$60. An even stronger indicator of fundamental changes is the rise in long-term contract pricing (the "Term" price). Unlike the spot price, which is highly sensitive to action by financial players and speculators, the term price reflects bulk uranium sales to utilities. The Term price has been trending upwards since August 2021 and, as recently as October 31, 2022, was trading at \$51.00/lb.

#### *Clean and in demand*

As emissions figures conclusively prove, nuclear power is one of the cleanest forms of energy available. It is on par with, and in some cases superior to, renewable energy when it comes to carbon emissions. More crucially, it provides baseload energy for large power grids that cities around the world rely upon.

According to the International Energy Association, nuclear power currently provides just over 10% of the world's electricity requirements and, as a result, prevents the emission of 2.1 billion tonnes of CO<sub>2</sub> equivalent every year.

According to the Intergovernmental Panel on Climate Change, a minimum of 80% of the world's electricity needs to be low carbon by 2050 if we are to prevent global temperature increases beyond 2°C. However, with global electricity demand forecast to grow between 80% and 130% by 2050, studies show that without nuclear energy, significant carbon emission reduction will not be possible.

The world's largest economies, including the USA and China, are already major users of nuclear energy, and they are not alone. Russia, UK, France, Canada, South Korea, India and Belgium, all rely heavily on nuclear energy. Even countries like the United Arab Emirates have nuclear power stations in operation and have more in the proposal stage.

The following is a list of select countries with operable nuclear reactors or those that are either under construction, planned or proposed:

<b>Country</b>	<b>In Operation</b>	<b>Under construction</b>	<b>Planned</b>	<b>Proposed</b>
China	54	22	42	160
India	22	8	12	28
Russia	37	3	25	21
USA	92	2	3	18
Canada	19	-	-	2
Japan	33	2	1	8
Saudi-Arabia	-	-	-	16
South Korea	25	3	-	2
Ukraine	15	2	-	7
Others	140	17	17	70
<b>Total</b>	<b>437</b>	<b>59</b>	<b>100</b>	<b>332</b>

Source: World Nuclear Association (World Nuclear Reactors & Uranium Requirements – [www.world-nuclear.org](http://www.world-nuclear.org) – Updated November 2022)

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### Uranium outlook (continued)

As the numbers demonstrate, nuclear energy is not only well established but it is in a continued state of expansion. In fact, the most recent World Nuclear Association's Fuel Report, 2020, shows a 26% increase in uranium demand over the next decade.

#### *Supply remains weakened*

While uranium demand prospects have continued to strengthen in recent years, uranium production has been suffering. For nearly a decade, a state of oversupply, combined with large, end-user stockpiles, resulted in years of low uranium prices. Eventually, the pricing environment forced major supplier action, such as:

- Kazatomprom, the world's largest uranium supplier, has cut production by 20%. In addition, recent civil unrest has highlighted Kazakhstan as an unstable jurisdiction. Events in January 2022 included the resignation of the government, and a request for foreign military aid to suppress the unrest.
- Cameco, the 2<sup>nd</sup> largest supplier in the world, shut down McArthur River - the world's highest-grade uranium mine. Due to the current, sustained higher prices, Cameco has announced it will restart the mine but that it will not re-enter production until 2024.
- Rio Tinto, one of the world's largest mining companies, has all but exited the uranium business – selling and winding down uranium operations and removing 6 million lbs of annual uranium production from the market.
- Investment dried up for any project or expansion that did not show highly competitive operating costs.

Additional factors include:

- In order to fulfill contractual obligations, Cameco has purchased material on the spot market rather than increase production. Cameco has also stated on multiple occasions that higher uranium prices are required in order to incentivize new production.
- Investment funds holding uranium inventories sold double the amounts they purchased in 2020, leading to a large drawdown of low-cost inventories available.
- In April 2021, Sprott Physical Uranium Trust ("SPUT") acquired Uranium Participation Corp. and relaunched as an investment trust. The Trust has been purchasing physical uranium on the spot market and, by sharing information on all of its transactions, it has been increasing the transparency of the uranium market. By the end of 2021, SPUT had acquired approximately one third of global annual uranium supply. With its purchases, SPUT has the potential to provide significant further upwards pressure on uranium prices. Kazatomprom has since co-founded a rival physical uranium fund which is currently deploying US\$50M in funds, and with plans to raise a further \$500M for uranium purchases.
- A rapid increase in Small Modular Reactor ("SMR") development has highlighted the potential for a paradigm shift in uranium demand fundamentals. Russia now has two commercial SMRs in operation, China connected its first to the grid in December 2021, and Canada is expected to have at least two commercial SMRs operating by 2028. In addition, countries including the US and UK are pouring billions of dollars into development and commercialization of SMR designs for domestic use and export. Importantly, leading SMR developer, NuScale Power LLC, has partnered with manufacturers to begin construction of equipment and machinery for an SMR production factory. With their numerous advantages over traditional, full-size reactors, SMRs could have a significant medium term demand impact, and could dramatically change the uranium fundamentals in the long term.
- The need to transition to carbon free energy has led to a global change in both sentiment and government action. This has been accelerated by Russia's invasion of Ukraine and has also led many countries to re-evaluate their energy security. As a result of these, and other factors, uranium prices enjoyed the largest jump in five years during 2020 and are currently substantially higher in 2022 than the 16-year low in 2016.

## Fission Uranium Corp.

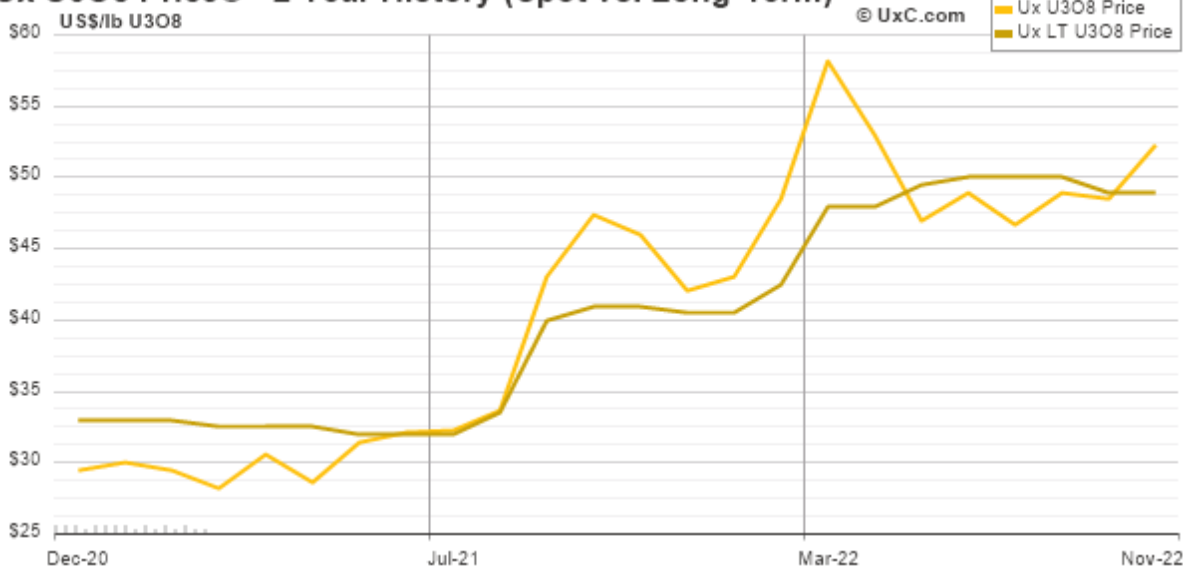
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### Uranium outlook (continued)

- A few of the positive actions recently announced include:
  - Japan plans to restart an additional seven reactors within the next 12 months. This, combined with polls showing a majority of Japanese citizens now support nuclear energy, highlights a reversal of the last 10 years of Japanese nuclear policy and sentiment. These restarts will also bring more utilities back into the market sooner than expected.
  - The UK has announced that nuclear power will form the backbone of its new energy strategy and has already announced eight new reactors.
  - South Korea has announced a reversal of its plan to phase out nuclear energy and instead will resume construction of four additional reactors.
  - The US has announced a \$6 billion financial package to help existing nuclear power stations.
  - France, already a heavy user of nuclear power, is seeking to build another 14 reactors.
  - Germany also extended the operation of two reactors.

### Ux U3O8 Price® - 2 Year History (Spot vs. Long-Term)



Source: Ux Consulting Company LLC ("UxC", [www.uxc.com](http://www.uxc.com): November 2022)

### Looking to the future

According to the UxC, an estimated 70% of uranium is produced at below \$30 per lb. Further analysis by UxC shows that, beyond 2025, higher-cost production will need to be brought online because of declining inventories and depletion of low-cost reserves. With spot prices rising, producers like Cameco have announced plans to resume shuttered production. However, Russia's invasion of Ukraine sent shock waves through the western world and security of supply has become a focus for utilities. Considering that the world's largest source of production is Kazakhstan, which sits firmly in the Russian sphere of influence, the spotlight is firmly on Canada's Athabasca Basin, which contains the highest-grade uranium deposits in the world. As highlighted by the Company's prefeasibility study, Fission's PLS project has the potential to become one of the lowest cost sources of uranium production in the world.

To compound the problem for uranium fuel customers, long-term contracting between 2014 and 2020 only occurred at a moderate level. Producers were slow to reduce supply because they were protected by higher price contracts and the high inventories protected consumers from temporary shortfalls. These factors are no longer in play to the same degree and analysts such as UxC believe that we could be approaching the start of a much larger contracting lifecycle, which may place upward pressure on prices.



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### Selected annual information

The financial information presented below for the annual periods was derived from financial statements prepared in accordance with IFRS and is expressed in Canadian dollars.

	Year Ended December 31 2021	Year Ended December 31 2020	Year Ended December 31 2019
	\$	\$	\$
Net loss and comprehensive loss	(6,800,894)	(9,008,140)	(5,399,758)
Total assets	399,187,604	351,567,107	322,724,264
Current liabilities	1,646,532	821,875	420,336
Non-current liabilities	10,476,923	9,857,300	322,463
Shareholders' equity	387,064,149	340,887,932	321,981,465
Basic and diluted loss per common share	(0.01)	(0.02)	(0.01)

### Summary of quarterly results

The financial information presented below for the current and comparative periods was derived from annual financial statements prepared in accordance with IFRS or interim financial statements prepared in accordance with IFRS applicable to the preparation of interim financial statements, including *IAS 34, Interim Financial Reporting*.

	September 30 2022	June 30 2022	March 31 2022	December 31 2021
	\$	\$	\$	\$
Exploration and evaluation assets	354,206,547	350,426,698	346,871,822	341,961,502
Working capital	32,210,728	36,462,312	47,971,325	52,851,029
Net loss and comprehensive loss	(1,404,371)	(2,830,864)	(5,199,560)	(922,100)
Net loss per share basic and diluted	(0.00)	(0.00)	(0.01)	(0.00)
	September 30 2021	June 30 2021	March 31 2021	December 31 2020
	\$	\$	\$	\$
Exploration and evaluation assets	339,781,526	330,206,604	324,816,853	320,185,305
Working capital	48,483,604	53,753,100	26,281,397	29,370,554
Net loss and comprehensive loss	(1,248,017)	(1,541,841)	(3,088,936)	(3,794,159)
Net loss per share basic and diluted	(0.00)	(0.00)	(0.01)	(0.01)

Net loss and comprehensive loss for the three month periods ended March 31, 2022, March 31, 2021 and December 31, 2020 increased compared to the other periods presented in the table above primarily as the result of stock based compensation recognized in those periods. Net loss and comprehensive loss for the three month period ended December 31, 2021 decreased compared to the other periods presented in the above table primarily as the result of an unrealized gain on its investment in Fission 3.0 Corp.

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### **Results of operations**

The expenses incurred by the Company are typical of exploration and development companies that do not have established cash flows from mining operations. Changes in these expenditures from quarter to quarter are impacted directly by non-recurring activities or events.

#### *Comparison of the three months ended September 30, 2022 and September 30, 2021*

The Company had a net loss and comprehensive loss of \$1,404,371 (\$0.00 basic and diluted loss per share) compared to a net loss and comprehensive loss of \$1,248,017 (\$0.00 basic and diluted loss per share). The change in net loss is primarily attributable to the following factors:

- Business development, public relations and communications, and trade shows and conferences fees increased to \$413,487 from \$84,975 in correlation with a return to in-person meetings and conferences attended during the period.
- Share based compensation increased to \$783,691 from \$468,676 due to the vesting of stock options during the period.
- The recognition of deferred financing costs decreased to \$nil from \$361,043 in correlation with repayment of the credit facility during the prior quarter.
- Gain on investment in Fission 3.0 Corp. decreased to \$107,926 from \$647,556 due to fair value changes during the period.
- Gain on short-term investments decreased to \$nil from \$198,297 in correlation with the underlying warrants being exercised during the prior quarter.
- Loss on warrant liability decreased to \$nil from \$731,492 in correlation with the underlying warrants being exercised during the prior quarter.

#### *Comparison of the nine months ended September 30, 2022 and September 30, 2021*

The Company had a net loss and comprehensive loss of \$9,434,795 (\$0.01 basic and diluted loss per share) compared to a net loss and comprehensive loss of \$5,878,794 (\$0.01 basic and diluted loss per share). The change in net loss is primarily attributable to the following factors:

- Business development, public relations and communications, and trade shows and conferences fees increased to \$789,130 from \$261,480 in correlation with a return to in-person meetings and conferences attended during the period.
- Share based compensation increased to \$4,372,053 from \$2,571,131 due to the vesting of stock options during the period.
- Foreign exchange loss amounted to \$1,359 compared to a gain of \$447,334 due to fair value changes of USD denominated liabilities during the comparative fiscal period and offsetting financial assets and liabilities denominated in USD in the current period.
- The recognition of deferred financing costs increased to \$1,449,849 from \$1,071,528 due to accelerated recognition as a result of the early credit facility repayment.
- Loss on investment in Fission 3.0 Corp. increased to \$1,400,889 from a gain of \$755,482 due to fair value changes during the period.
- Loss on short-term investments increased to \$304,136 from a gain of \$209,839 due to fair value changes and exercises during the period.
- Gain on warrant liability increased to \$410,577 from a loss of \$1,706,041 due to fair value changes and exercises during the period.

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### Liquidity and capital resources

Fission Uranium is an exploration and evaluation stage company and has not yet determined whether its exploration and evaluation assets contain ore reserves that are economically recoverable. The recoverability of the amounts shown for exploration and evaluation assets, including the acquisition costs, is dependent upon the existence of economically recoverable reserves, the ability to obtain necessary financing to complete the development of those reserves, and future profitable production.

The Company's ability to meet its obligations and fund exploration programs depends on its ability to raise funds. The Company anticipates being able to raise funds, as necessary, primarily through the issuance of common shares or debt. To date the Company has been successful in raising funds however there are no assurances that the Company will be successful in raising funds in the future. On an ongoing basis, the Company monitors and adjusts, when required, exploration programs as well as general and administrative costs to ensure that adequate levels of working capital are maintained. The Company has no exploration and evaluation asset agreements that require it to meet certain expenditures.

#### *Credit Facility*

In April 2020, the Company entered into a senior secured credit facility (the "Facility") with Sprott Resource Lending II (Collector) L.P. ("Sprott"). Under the terms of the Facility, Sprott advanced the Company a gross amount of US\$10,000,000 (net cash proceeds were subject to a 3% discount) with a four-year term (the "Maturity Date"). The Facility bears interest at a rate of 10% per annum, payable monthly with the option to pay a portion of the interest due by way of common shares. The Company may voluntarily repay the Facility in whole or in part anytime before the Maturity Date, provided that a minimum of 24 months interest has been paid.

On April 7, 2022, the Company announced that it repaid the remaining Facility balance in full. Therefore, the outstanding principal of the Facility as at September 30, 2022 was \$nil.

#### *At-the-market financing program*

In April 2022, the Company entered into an equity distribution agreement providing for an at-the-market ("ATM") equity offering program. The ATM will allow Fission to, from time to time, offer and sell, in Canada through the facilities of the Toronto Stock Exchange, such number of common shares as would have an aggregate offering price of up to \$50 million.

#### *Bought Deal Financing*

In May 2021, the Company closed a bought deal financing of 57,500,000 units at a price of \$0.60 per unit for gross proceeds of \$34,500,000. Each unit consists of one common share and one half of one common share purchase warrant. Each whole warrant is exercisable into one common share at a price of \$0.85 for a period of 36 months.

The fair value of the common shares was determined based on the closing trading price on May 11, 2021 and the fair value of warrants was determined using the Black-Scholes pricing model. A total of \$29,325,621 was recorded in share capital in relation to the common shares and \$5,174,379 was recorded in other capital reserves in relation to the warrants. A total of \$310,157 was recorded in other capital reserves for the proportionate share of financing costs related to the warrants in the units issued. The fair value of the warrants was determined using the following assumptions: volatility of 94.91%; risk-free interest rate of 0.30%; expected life of 1.5 years; and a dividend rate of 0%.

#### *Use of Proceeds*

The following table provides a comparison of the actual use of proceeds to the intended use of proceeds related to the above-noted bought deal financing:

	<b>Intended use of proceeds</b>	<b>Actual use as of September 30, 2022</b>
	\$	\$
May 2021: PLS feasibility study/engineering support/Permitting, G&A	34,500,000	29,658,110

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### **Liquidity and capital resources (continued)**

#### *Changes in working capital for the nine months ended September 30, 2022*

Working capital is a non-GAAP measure calculated as total current assets less total current liabilities. Working capital does not have any standardized meaning prescribed by IFRS and is therefore unlikely to be comparable to similar measures presented by other companies.

At September 30, 2022, the Company had a working capital balance of \$32,210,728 as compared to \$52,851,029 at December 31, 2021. The decrease in working capital is primarily due to the repayment of the Credit Facility, PLS program expenditures and regular administrative expenses, net of the proceeds from exercises of stock options and warrants.

#### *Cash flow for the three months ended September 30, 2022*

Cash and cash equivalents for the three months ended September 30, 2022 decreased by \$3,887,328 as a result of:

- Cash outflows from operating activities of \$888,508;
- Cash outflows related to exploration and evaluation asset additions of \$3,224,927
- Cash inflows related to interest income earned on cash and cash equivalents of \$270,509;
- Cash outflows related to the acquisition of property and equipment of \$68,954;
- Cash outflows related to share issuance costs of \$24,407;
- Cash inflows from the exercise of warrants of \$61,849; and
- Cash outflows from lease obligation payments of \$12,890.

#### *Cash flow for the nine months ended September 30, 2022*

Cash and cash equivalents for the nine months ended September 30, 2022 decreased by \$20,797,012 as a result of:

- Cash outflows from operating activities of \$3,465,388;
- Cash outflows related to exploration and evaluation asset additions of \$10,467,444
- Cash inflows related to interest income earned on cash and cash equivalents of \$522,969;
- Cash inflows from the disposition of short-term investments of \$56,112;
- Cash outflows related to the acquisition of property and equipment of \$70,438;
- Cash outflows related to share issuance costs of \$373,499;
- Cash inflows from the exercise of warrants of \$1,339,299;
- Cash inflows from the exercise of stock options of \$479,566;
- Cash outflows from repayment of the credit facility of \$8,773,134
- Cash outflows related to repayment the credit facility of \$8,619 and
- Cash outflows from lease obligation payments of \$36,436.

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### Related party transactions

The Company has identified the President and CEO, current and former CFO, VP Project Development, VP Exploration, and the Company's current and former directors as its key management personnel during all or part of the periods presented below.

	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
	\$	\$	\$	\$
<i>Compensation Costs</i>				
Wages, consulting and directors fees paid or accrued to key management personnel and companies controlled by key management personnel	<b>336,128</b>	362,673	<b>1,051,667</b>	1,039,942
Share-based compensation pursuant to the vesting schedule of options granted to key management personnel	<b>679,298</b>	412,358	<b>3,792,265</b>	2,187,020
	<b>1,015,426</b>	775,031	<b>4,843,932</b>	3,226,962

The Company has a Directors Remuneration Plan (the "DRP Plan") whereby a portion of director fees can be paid through the issuance of common shares ("Director Remuneration Shares") in lieu of the payment of cash or other means of remuneration. Included in compensation costs is the value of shares issued under the DRP Plan. During the nine month period ended September 30, 2022, the Company issued 52,594 shares with a total value of \$42,667 under the DRP Plan (September 30, 2021 - 66,680 shares valued at \$42,667).

Included in accounts payable at September 30, 2022 is \$40,803 (December 31, 2021 - \$421,808) for wages payable and consulting fees due to key management personnel and companies controlled by key management personnel.

Transactions with CGN Mining, which is deemed to be a related party as it accounts for its investment in the Company as an investment in an associate, have been disclosed in the "PLS property" section of this MD&A.

These transactions were in the normal course of operations.

### Outstanding share data

As at November 11, 2022, the Company has 687,736,959 common shares issued and outstanding, 39,836,667 incentive stock options outstanding with exercise prices ranging from \$0.31 to \$0.85 per share and 39,187,117 warrants outstanding with exercise prices ranging from \$0.41 to \$0.85.

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### **Internal controls over financial reporting**

The Company's management is responsible for designing and maintaining an adequate system of internal controls over financial reporting as required under National Instrument 52-109 – *Certification of Disclosure in Issuers' Annual and Interim Filings*. Management designed the internal control system based on the Internal Control – Integrated Framework (2013) published by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). From this framework, an evaluation of the internal control system was completed, and management concluded that the system of internal controls over financial reporting was effective as at December 31, 2021.

Any internal control system, no matter how well designed, has inherent limitations. Therefore, internal controls can only provide reasonable assurance with respect to financial statement preparation and presentation.

There have not been any significant changes in the Company's internal control over financial reporting during the nine month period ended September 30, 2022 that have materially affected or are reasonably likely to materially affect the Company's internal controls over financial reporting.

### **Disclosure controls and procedures**

The Company's disclosure controls and procedures are designed to provide reasonable assurance that information required to be disclosed by the Company is recorded, processed, summarized and reported within the time periods specified in the securities legislation. The Company's management has concluded that the disclosure controls and procedures were effective as at December 31, 2021.

Any control system, no matter how well designed, has inherent limitations. Therefore, disclosure controls and procedures can only provide reasonable assurance with respect to timely disclosure of material information.

### **Financial assets**

All financial assets are initially recorded at fair value and categorized into the following two categories for subsequent measurement purposes: amortized cost and fair value through profit or loss ("FVTPL").

A financial asset is classified at 'amortized cost' only if both of the following criteria are met: a) the objective of the Company's business model is to hold the asset to collect the contractual cash flows; and b) the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal outstanding.

The Company has classified its cash and cash equivalents and amounts receivable at amortized cost for subsequent measurement purposes. The Company has classified its investment in Fission 3.0 Corp. at FVTPL for subsequent measurement purposes.

### **Financial liabilities**

Financial liabilities include accounts payable and accrued liabilities and are initially recorded at fair value. Subsequently, financial liabilities are measured at amortized cost using the effective interest rate method.



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### **Key estimates and judgments**

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date are described below. The Company based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising beyond the control of the Company. Such changes are reflected in the assumptions when they occur.

#### *Exploration and evaluation assets*

The application of the Company's accounting policy for exploration and evaluation assets requires judgment in the following areas:

- (i) Determination of whether any impairment indicators exist at each reporting date giving consideration to factors such as mining title expiration dates, budgeted expenditures, discontinuation of activities in any area and evaluation of any data which would indicate that the carrying amount of exploration and evaluation assets is not recoverable; and
- (ii) Assessing when the commercial viability and technical feasibility of the project has been determined, at which point the asset is reclassified to property and equipment.

### **Significant accounting policies**

A summary of the Company's significant accounting policies is included in Note 2 of the audited financial statements for the year ended December 31, 2021.

### **Cautionary notes regarding forward-looking statements**

Certain information contained in this MD&A constitutes "forward-looking statements" and "forward-looking information" within the meaning of Canadian legislation.

Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", 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".

Forward looking statements are based on the opinions and estimates of management as of the date such statements are made, and are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking statements. The Company believes that the expectations reflected in this forward-looking information are reasonable, but no assurance can be given that these expectations will prove to be correct and such forward-looking information included in this MD&A should not be unduly relied upon. This information speaks only as of the date of this MD&A. In particular, this MD&A may contain forward-looking information pertaining to the following: the net present value, metal recoveries, capital costs, operating costs, production, rates of return, payback and impact of the R1515W, R840W and R1620E zones on the operations; the likelihood of completing and benefits to be derived from corporate transactions; the estimates of the Company's mineral resources on its PLS property; estimated exploration and development expenditures; expectations of market prices and costs; supply and demand for uranium; possible impacts of litigation and regulatory actions on the Company; exploration, development and expansion plans and objectives; expectations regarding adding to its mineral resources through acquisitions and exploration; and receipt of regulatory approvals, permits and licences under governmental regulatory regimes.

There can be no assurance that such statements will prove to be accurate, as the Company's actual results and future events could differ materially from those anticipated in this forward-looking information as a result of the factors discussed below in this MD&A under the heading "Risks and Uncertainties". Accordingly, readers should not place undue reliance on forward-looking statements.

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### **Cautionary notice to US investors regarding mineral resource estimates**

These factors are not, and should not, be construed as being exhaustive. 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. The forward-looking information contained in this MD&A is expressly qualified by this cautionary statement. The Company does not undertake any obligation to publicly update or revise any forward-looking information after the date of this MD&A or to conform such information to actual results or to changes in the Company's expectations except as otherwise required by applicable legislation.

Disclosure of mineral resource estimates and mineral classification terms herein are made in accordance with the Canadian National Instrument 43-101 *Standards of Disclosure for Mineral Projects*. NI 43-101 is a rule established by the Canadian Securities Administrators ("CSA") that sets the standards for all public disclosure by issuers regarding scientific information and technical data concerning mineral projects. Unless otherwise indicated, all mineral resource estimates contained in the technical disclosure have been prepared in accordance with NI 43-101 and the Canadian Institute of Mining, Metallurgy and Petroleum Definition Standards on Mineral Resources and Reserves ("CIM Definition Standards"). Canadian standards, including NI 43-101, differ significantly from the historical requirements of the United States Securities and Exchange Commission ("SEC"), and mineral resource information contained or incorporated by reference in this prospectus supplement may not be comparable to similar information disclosed by U.S. companies.

The SEC has adopted amendments to its disclosure rules to modernize the mineral property disclosure requirements for issuers whose securities are registered with the SEC. These amendments became effective February 25, 2019 (the "SEC Modernization Rules") and, following a two-year transition period, the SEC Modernization Rules replaced the historical property disclosure requirements for mining registrants that are included in SEC Industry Guide 7 for fiscal years beginning January 1, 2021 or later.

Under the SEC Modernization Rules, the definitions of "proven mineral reserves" and "probable mineral reserves" have been amended to be substantially similar to the corresponding CIM Definition Standards and the SEC has added definitions to recognize "measured mineral resources", "indicated mineral resources" and "inferred mineral resources" which are also substantially similar to the corresponding CIM Definition Standards; however, there are still differences in the definitions and standards under the SEC Modernization Rules and the CIM Definition Standards. Therefore, the Company's mineral resources as determined in accordance with NI 43-101 may be significantly different than if they had been determined in accordance with the SEC Modernization Rules.

### **Risks and uncertainties**

The Company is subject to a number of risks and uncertainties, including: uncertainties related to the impact of the COVID-19 pandemic on capital markets and supply chains; uncertainties related to exploration and development; uncertainties related to the nuclear power industry; the ability to raise sufficient capital to fund exploration and development; changes in economic conditions or financial markets; increases in input costs; litigation, legislative, environmental and other judicial, regulatory, political and competitive developments; technological or operational difficulties or inability to obtain permits encountered in connection with exploration activities, labour relations matters, and economic issues that could materially affect uranium exploration and mining. The cost of conducting and continuing mineral exploration and development is significant, and there is no assurance that such activities will result in the discovery of new mineralization or that the discovery of a mineral deposit will be developed and advanced to commercial production. The Company continually seeks to minimize its exposure to these adverse risks and uncertainties, but by the nature of its business and exploration activities, it will always have some degree of risk. For further discussion related to risks and uncertainties, please refer to the Company's annual information form for the year ended December 31, 2021 available on SEDAR at [www.sedar.com](http://www.sedar.com).