



Fission
URANIUM CORP.

Management's Discussion & Analysis

Fission Uranium Corp.

For Three Month Period Ended March 31, 2023

(expressed in thousands of Canadian dollars, except as noted)

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Introduction

The following Management's Discussion and Analysis ("MD&A"), prepared as of May 12, 2023, 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 three month period ended March 31, 2023. The reader should also refer to the audited financial statements for the year ended December 31, 2022.

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, including 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. 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, 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, 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.

The Company also has the West Cluff property comprising 3 claims totalling 11,148-hectares in the western Athabasca Basin region of northern Saskatchewan. These claims are prospective for high-grade uranium and are located ~75km north of the Company's flagship PLS project, and less than 3km west of the past producing Cluff Lake mine.

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Operations Outlook

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 production;
- Improving and de-risking the strong economic parameters of the Triple R deposit (as defined by the feasibility study report SEDAR filed on March 2, 2023) through the advanced engineering design and procurement, through the permitting and regulatory process and continuing to develop strong cooperative and supportive relationships with indigenous rightsholders and local stakeholders; and
- Engaging in exploration designed to increase the size of the Triple R resource and to discover new occurrences of high-grade mineralization on the PLS property.

Environmental, Social and Governance initiatives

Fission is committed to the responsible development of the PLS project. The Company has engaged a specialized Environment, Social and Governance ("ESG") consulting firm to assist the Company in assessing and developing its ESG policies and strategy. The Company has also renamed its Corporate Governance and Nominating Committee as the ESG Committee and is working with advisors and counsel to expand that committee's mandate and update or formalize policies such as: Diversity, Equity and Inclusion Policy; Health, Safety Environment and Community Policy; Whistleblower Policy; Anti-Bribery and Anti-Corruption Policy; and Enterprise Risk Policy.

Additionally, the Company has strengthened its Board of Directors with a sustainability and ESG expert and its PLS operations team by adding an Environmental Manager. Fission is also committed to building mutually respectful, transparent and productive relationships with local rightsholders and stakeholders. The Company has signed separate Engagement and Capacity Funding agreements with six different Indigenous rightsholders who have the potential for impacts to their traditional land use and treaty rights due to the PLS project.

2023 Highlights

Corporate

On February 9, 2023, the Company appointed Beatriz Orrantia to the Board of Directors. Ms. Orrantia has over 17 years of mining industry experience in both legal and operational capacities. She is a sustainability and ESG expert, previously VP Special Projects at Barrick Gold. Prior to joining Barrick Gold, she was an M&A, securities and mining lawyer at leading law firms in Toronto.

Operations

On April 27, 2023, the Company announced a new, major milestone with an application to the Canadian Nuclear Safety Commission for a license to construct a uranium mine and mill facility at the PLS project. Additionally, Fission has commenced the Front End Engineering Design and continues to advance the PLS project on schedule, including the completion of the geotechnical drilling, hydrogeological holes, test pits and downhole Vertical Seismic Profiling geophysical surveys.

Also during April, the Company completed a winter program at its PLS property. As reported in January, the program included geotechnical testing of key areas identified for surface infrastructure as identified in the recently released feasibility study.

On March 2, 2023, further to release of results in January, the Company filed a technical report conducted by Tetra Tech Canada Inc. and titled "Feasibility Study on the Patterson Lake South Property" (the "Feasibility Study" or "FS", SEDAR filed on March 2, 2023) for its PLS property. These results further

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enhance the robust economics outlined in the 2019 pre-feasibility study and confirm the economic strength of the project as well as its minimal environmental footprint.

On January 23, 2023, the Company announced the hiring of Jeff Pryznyk, Engineering Licensee, A.Sc.T as the Company's Environmental Manager. Mr. Pryznyk is an environment, health and safety professional with two decades of experience working in Saskatchewan, including 15 years in mining.

On January 12, 2023, the Company announced that it entered into a capacity funding agreement with the Métis Nation of Saskatchewan ("MN-S").

Exploration and Evaluation Properties

Details of the Company's properties as of March 31, 2023 are shown below:

Property	Location	Ownership	Claims	Hectares	Stage	Carrying value
Patterson Lake South	Athabasca Basin, SK	100%	17	31,039	Permitting	\$ 363,558
West Cluff Lake	Athabasca Basin, SK	100%	3	11,148	Prospecting	\$ 11
Totals			20	42,187		\$ 363,569

PLS Property

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 U₃O₈ production and has an option to purchase up to an additional 15% U₃O₈ production from the PLS property for a certain period of time, after commencement of commercial production.

Winter Program – Front End Engineering Design

In April 2023, the Company commenced the Front End Engineering Design ("FEED") and provided an update that activities to advance the PLS project continue on schedule, including the completion of the geotechnical drilling, hydrogeological holes, test pits and downhole Vertical Seismic Profiling "VSP" geophysical surveys.

FEED progress highlights:

- Geotechnical drill holes to support the design of the waste rock stockpiles and mill area facilities have been completed. Data collected from seven drill holes totaling 765.0m has been collected to confirm Feasibility Level assessment and to inform future Detailed Design assessment.
- Twenty test pits along planned road allowances, the waste stockpile area and the mill area were completed to assess and support earthworks planning at Detailed Design.
- Downhole VSP geophysical surveys at the planned decline location and mill area have been completed. Results from this survey will be used to inform future Detailed Design assessment.
- Hydrogeological holes to gather additional data on the hydraulic conductivity of the basement rock have been completed. Installation of three monitoring wells and two pumping wells, totaling 962.8m, were drilled in close proximity to the R780E crown pillar and on the hangingwall and footwall of the deposit. One pumping well was pressure grouted and re-drilled to determine the effectiveness of grouting on reducing hydraulic conductivity within the basement rock. This additional data will be used to update the hydrogeologic model to inform underground mine planning at Detailed Design.
- The Company is compiling the FS report recommendations to formalize a full scope of work for FEED and intends to appoint a lead consultant during Q2.

Feasibility Study

In 2019, the Company completed first a "hybrid open-pit and underground" prefeasibility level development scenario and followed up with an "underground-only" prefeasibility study "U/G PFS". While both mining studies showed positive outcomes, the results of the U/G PFS study showed stronger merits

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in most measurable criteria. The U/G PFS recommended that the Company advance the PLS project to a feasibility study.

In June 2021, the Company commenced field work on a Feasibility Study ("FS") for the PLS project following the results of the aforementioned U/G PFS which outlined the potential for PLS to be one of the lowest operating cost uranium mines in the world. Concurrent with initial FS field work, a 25-hole core drill program targeting to upgrade the majority of the R840W Zone to Indicated category, was completed in August 2021.

On January 17, 2023, the Company announced results of the Feasibility Study conducted by Tetra Tech Canada Inc. ("Tetra Tech") and titled "Feasibility Study on the Patterson Lake South Property" (the "Feasibility Study" or "FS", SEDAR filed on March 2, 2023). The impressive FS results further enhance the robust economics outlined in the 2019 U/G PFS.

PLS Feasibility Study "FS" highlights:

- Construction timeline of 3 years with an estimated initial capital cost of C\$1.155B
- Increased mine life to ten years with LOM production of 90.9 million lbs of U₃O₈
- Addition of R840W orebody into the FS mine plan contributing to increased Mineral Reserves
- Average unit operating cost of C\$13.02/lb U₃O₈
- Robust post-tax economics using a long-term U₃O₈ price of US\$65/lb:
 - IRR of 27.2%
 - NPV of \$1.204B at 8% discount
 - Payback period of 2.6 years

Scope for Resource Growth

While the FS only considers Indicated Resources from the R780E, R840W and R00E zones, the mine plan has been deliberately designed to accommodate additional material from the R1515W and R1620E zones based on the potential future conversion of Inferred Resources to Indicated Resources. The majority of mineralization at these two on-strike, high-grade zones is currently defined as Inferred Mineral Resource classification and thus not considered for inclusion in the FS mine plan. As proven by drilling the R780E, R840W and R00E zones, the Company has an excellent track record of converting Inferred-category resources to Indicated-category. Most zones that make up the Triple R deposit are open in multiple directions. As a result, there is a clear path for growing the Triple R deposit, potentially leading to an increased resource as well as a longer mine life.

- Mine Life and Zone Expansion: The FS mine plan has increased the mine life to 10 years, compared to the U/G PFS. Both the R780E and R840W zones are open at depth and along the plunge to the east. Further opportunity exists to grow the resource in those directions, potentially extending the underground mine life even further.
- Additional Zones: The FS mine plan has a future opportunity to accommodate the potential conversion of Inferred Resources to Indicated Resources at two high-grade, on-strike zones - R1515W and R1620E – that are not yet part of Mineral Reserves.
- Mineralization Upgrade: The FS mine plan does not include areas of Inferred Mineral Resources in the R00E, R840W and R780E zones. An opportunity exists to upgrade to Indicated Mineral Resource with future planned drilling.

Reduced Environmental Impact

- The underground mine plan eliminates direct physical impacts on Patterson Lake and the Clearwater River drainage. Other than a dock, freshwater intake and treated effluent diffuser, all other infrastructure related to mining and processing at PLS is set back to maintain an acceptable riparian buffer to the shoreline of Patterson Lake.
- The revised Project layout maintains a compact footprint, and facilities have been placed to avoid local areas of old-growth jack pine forest and heritage resource sites.

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- In the absence of hydro utilities, using LNG for site power generation instead of diesel, while only marginally reducing the greenhouse gases, significantly decreases emissions of particulates and sulphur and nitrogen compounds.
- Metallurgical test work indicates that the Project will be able to meet the water quality ranges for treated effluent discharges found at other uranium mining operations in Saskatchewan.
- Modelling of the Tailings Management Facility (TMF) interactions with groundwater indicates that the current design will be protective of groundwater quality in the long term and thus protective of the Patterson Lake drainage.
- At year-end 2022, Fission had capacity communication and funding engagement agreements with all the Indigenous groups with the potential for impacts to their traditional land use and treaty rights due to the Project.
- Fission responded to local concerns over the proposed bypass of Highway 955 around the site by leaving the road route as it is.

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 U₃O₈. The larger indicated resource is primarily a result of infill drilling programs on the R780E and R840W zones during 2019 to 2021.

Summary of Triple R Mineral Resources by Zone – 2022

Classification	Zone	Tonnes	Grade (%U ₃ O ₈)	Grade (Au g/t)	Contained Metal	
					U ₃ O ₈ (lb)	Gold (oz)
Indicated	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
Indicated Total		2,688,000	1.94	0.61	114,900,000	52,700
Inferred	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
	Inferred Total		635,000	1.10	0.44	15,400,000

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.
2. Mineral Resources are reported at a cut-off grade of 0.25% U₃O₈ and a minimum mining width of 1.0m.
3. The cut-off grades are based on price of US\$50/lb U₃O₈ and an exchange rate of US\$0.75/C\$1.00.
4. Mineral Resources are inclusive of Mineral Reserves.
5. Due to rounding, zone by zone figures may not sum to certain 'Total' figures.

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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 commenced the EA as per the requirements of The Saskatchewan Environmental Assessment Act. Fission had requested approval under Section 15 of the Canada Impact Assessment Act for a determination from the MOE 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 had also submitted a draft Terms of Reference "TOR". The final TOR 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. On February 9, 2023, Fission submitted a "Notice of Intent to Submit an Application for a License to Prepare Site and Construct a Facility" to CNSC.

Rightsholders Engagement Activities

As part of its progress within the EA phase for the PLS project in Saskatchewan, Canada, the Company is committed to building mutually respectful, transparent and productive relationships with local rightsholders and stakeholders. The Company has signed separate Engagement and Capacity Funding agreements with six different Indigenous rightsholders who have the potential for impacts to their traditional land use and treaty rights due to the Project. This includes agreements with:

1. Clearwater River Dene Nation ("CRDN")
2. Metis Nation of Saskatchewan ("MN-S")
3. Birch Narrows Dene Nation ("BNDN")
4. Buffalo River Dene Nation ("BRDN")
5. Ya'thi Néné Lands and Resources Office ("YNLR")
6. Athabasca Chipewyan First Nations ("ACFN")

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, MN-S, BNDN, BRDN, YNLR and ACFN. These studies will inform the various Indigenous groups and will be incorporated into the ongoing assessment of PLS.

The Company has shared a summary of its engagement approach on the '[Engagement](#)' page of its 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.

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.

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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.

West Cluff property

In December 2022, Company staked a new 11,148-hectare property in the western Athabasca Basin region of northern Saskatchewan. The West Cluff property is prospective for high-grade uranium and is located ~75km north of the Company's flagship PLS project, and less than 3km west of the past producing Cluff Lake mine.

The highly prospective property covers both the margin and near margin western side of the Carswell Structure, in the Western Athabasca Basin district. The Carswell Impact Structure is a large, circular shaped section measuring ~18km in diameter, comprised primarily of the basement rock that underlies the Athabasca Basin sandstone formations. A major geologic tectonic event, possibly related to a meteorite impact, resulted in the basement rock of the Carswell Structure being quickly thrust upwards for several hundred meters through the overlying Athabasca sandstones. The Carswell Structure is tectonically complex, with a number of ring faults surrounding the margin of the structure and a series of linear faults perpendicular to the ring faults within the basement structure, often expressing themselves as discrete Electromagnetic "EM" conductors. High grade Athabasca Basin related uranium deposits are often associated with EM fault conductors, within hydrothermal altered rock, in a setting similar to the West Cluff property.

The major past producing Cluff Lake mine (over 62 million pounds of uranium produced) is located on the southern edge of the Carswell Structure in a tectonically complex environment, similar to that interpreted on the West Cluff property and is within 3km of the property.

Uranium sector outlook

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 (*Source: [Orano - unpacking nuclear](#)*). 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 CO² equivalent every year. However, more is needed. According to the Intergovernmental Panel on Climate Change, a minimum of 80% of the world's electricity needs to be low carbon by 2050 in order to prevent global temperature increases beyond 2°C. 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.

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Fortunately, there is a global nuclear reactor construction boom underway and the World Nuclear Association's fuel analysis shows a 33% increase in uranium demand through 2030. Dramatically improved sentiment regarding nuclear energy - from the public, utilities, and governments around the world - is now evident. New reactor programs have been announced by a number of countries, including France, the UK, Poland, South Korea, and the US is providing billions of dollars in financial incentives for nuclear power operators. Additionally, the first commercial small modular reactors (SMR) are now in operation and multiple new SMRs are under construction in a variety of countries. Perhaps most significantly of all, Japan is restarting additional reactors in the near-term following polls that show the majority of Japanese citizens now support nuclear energy - a reversal of the last 10 years of Japanese nuclear policy and sentiment. At this time, there are currently 438 operable reactors worldwide, 58 under construction, 104 reactors in the planning phase, and a further 341 in the proposal phase.

Although uranium demand is increasing, uranium supply is still dealing with the legacy of a long downturn that led to the shuttering of higher cost uranium producing operations and minimal investment in exploration and development. According to the Ux Consulting Company LLC ("UXC"), an estimated 70% of uranium is produced at below \$30/lb but, beyond 2025, higher-cost production must be brought online due to declining inventories and depletion of low-cost reserves. However, economic deposits of uranium are extremely hard to find and only a small number of projects that exist globally - such as Fission's PLS project - are advanced enough to enter production this cycle.

Uranium is well known and well proven as a thin market and utilities have worked their way through the supply overhang that played a significant role in the post-Fukushima downturn. Further tightening of the spot market has occurred due to the aggressive actions of buy-and-hold physical uranium trusts and funds. In April 2021, the Sprott Physical Uranium Trust ("SPUT") was launched as an investment trust. The SPUT has been purchasing physical uranium on the spot market and this, by sharing information on its transactions, has increased transparency of the uranium market. By the end of 2021, SPUT had acquired approximately one third of global annual uranium supply. With continued purchases, SPUT has the potential to provide further upwards pressure on uranium prices. Kazatomprom, currently the world's largest uranium producer, has since co-founded a rival physical uranium fund.

These changes in market dynamics have resulted in large increases in the uranium spot price since Q2, 2021, more than doubling to a high of U\$63.50/lb by April 2022. This is the first time since 2012 that spot prices have risen above U\$60.00/lb. An even stronger indicator of fundamental change 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 steadily upwards since August 2021 and, as of March 31, 2023, was trading at U\$53.00/lb.

In addition to climate change driving the growth of nuclear energy and uranium demand, the market is now taking a much closer look at supply jurisdiction as countries and utilities factor in the need for security of supply. Russia's invasion of Ukraine led to the withholding of fuel supplies (oil and gas) from Russia's EU customers, causing billions of dollars in economic damage. Russia is a uranium producer and a major player in nuclear fuel processing, and its neighbour Kazakhstan - over which it has strong political influence - is the world's largest producer of uranium. Western utilities are now more focused on uranium sourced from stable, politically reliable jurisdictions. As part of this response, the Canadian government has included uranium on its critical minerals list - part of a new federal government program to support the development of domestic and global value chains for the green and digital economy.

With the intense tightening of the supply and demand balance, Fission management is highly 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. The Company is fortunate to have its flagship property located in the politically stable and investment friendly province of Saskatchewan, Canada. The Fraser Institute, as well as several other similar institutions, publish an annual report on mining which includes a ranking of 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.

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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 thousands of Canadian dollars.

	Year Ended December 31 2022	Year Ended December 31 2021	Year Ended December 31 2020
	\$	\$	\$
Net loss and comprehensive loss	(8,759)	(6,801)	(9,008)
Total assets	403,384	399,188	351,567
Current liabilities	1,468	1,647	822
Non-current liabilities	225	10,477	9,857
Shareholders' equity	401,691	387,064	340,888
Basic and diluted loss per common share	(0.01)	(0.01)	(0.02)

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*.

	March 31 2023	December 31 2022	September 30 2022	June 30 2022
	\$	\$	\$	\$
Exploration and evaluation assets	363,569	357,311	354,207	350,427
Working capital	44,201	40,860	32,211	36,462
Net (loss) income and comprehensive (loss) income	(3,343)	676	(1,404)	(2,831)
Net (loss) income per share basic and diluted	(0.00)	0.00	(0.00)	(0.00)
	March 31 2022	December 31 2021	September 30 2021	June 30 2021
	\$	\$	\$	\$
Exploration and evaluation assets	346,872	341,962	339,782	330,207
Working capital	47,971	52,851	48,484	53,753
Net loss and comprehensive loss	(5,200)	(922)	(1,248)	(1,542)
Net loss per share basic and diluted	(0.01)	(0.00)	(0.00)	(0.00)

The net income and comprehensive income for the three month period ended December 31, 2022 and decreased net loss and comprehensive loss for the three month period ended December 31, 2021 were primarily the result of significant fair value changes on its investment in F3 Uranium Corp. (formerly Fission 3.0 Corp.). Net loss and comprehensive loss for the three month periods ended March 31, 2023 and March 31, 2022 increased compared to the other periods presented in the table above primarily as the result of stock based compensation recognized in those periods.

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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.

Three months ended March 31, 2023 and March 31, 2022

The Company had a net loss and comprehensive loss of \$3,343 (\$0.00 basic and diluted loss per share) compared to a net loss and comprehensive loss of \$5,200 (\$0.01 basic and diluted loss per share). The change is primarily attributable to the following factors:

- Public relations and corporate development costs increased to \$391 from \$137 with the continued return to in-person events and an increased focus by the Company on investor awareness.
- Share based compensation increased to \$3,134 from \$2,513 due to the vesting of stock options during the period.
- Interest income increased to \$539 from \$97 due to the continued increase in treasury rates.
- Gain on investment in F3 Uranium Corp. increased to \$539 from a loss of \$591 due to fair value changes during the period.
- Financing costs decreased to \$nil from \$359 in correlation with repayment of the credit facility during the previous year.
- Loss on short-term investments decreased to \$nil from \$304 in correlation with the underlying warrants being exercised during the previous year.
- Loss on warrant liability decreased to \$nil from \$648 in correlation with the underlying warrants being exercised during the previous year.

Liquidity and capital resources

The Company has not yet determined whether its exploration and evaluation assets contain ore reserves that have technical feasibility and commercial viability. The recoverability of the amounts shown for the exploration and evaluation assets, including the acquisition costs, is dependent upon the existence of economically recoverable reserves, the ability of the Company to obtain necessary permitting, licensing and financing to complete the development of those reserves, and upon future profitable production.

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, through its agents, 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.

During the year ended December 31, 2022, the Company issued a total of 10,899,300 shares at an average price of \$0.7339 per share for gross proceeds of \$7,999 under the ATM program. The Company paid the agents a commission equal to 3.0% of the gross proceeds.

During the three month period ended March 31, 2023, the Company issued a total of 11,862,500 shares at an average price of \$0.8433 per share for gross proceeds of \$10,004 under the ATM program. The Company paid the agents a commission equal to 3.0% of the gross proceeds.

Subsequent to March 31, 2023, the Company issued a total of 5,146,000 shares at an average price of \$0.6159 per share for gross proceeds of \$3,169 under the ATM program. The Company paid the agents a commission equal to 3.0% of the gross proceeds.

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Working capital

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 March 31, 2023, the Company had a working capital balance of \$44,201 as compared to \$40,860 at December 31, 2022. The increase in working capital is primarily due to net proceeds from sales under the Company's ATM facility, partially offset by PLS program expenditures and routine administrative expenses.

Cash flow

Cash and cash equivalents for the three months ended March 31, 2023 increased by \$4,268 as a result of the following components of cash flows:

- Operating activities generated cash outflows of \$1,933 primarily due to routine administrative activities.
- Investing activities generated cash outflows of \$3,501 primarily due to exploration and evaluation asset additions.
- Financing activities generated cash inflows of \$9,702 primarily due to net proceeds from the issuance of common shares under the Company's ATM facility.

Capital Management

The Company's ability to meet its obligations and fund exploration and evaluation 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 and evaluation 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.

Related party transactions

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

	Three Months Ended	
	March 31 2023	March 31 2022
	\$	\$
Wages and consulting fees	294	289
Director fees	141	72
Share-based compensation	2,344	2,181
	2,779	2,542

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 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 three month period ended March 31, 2023, the Company issued Nil shares with a total value of \$Nil under the DRP Plan (March 31, 2022 – Nil shares valued at \$Nil).

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Included in accounts payable at March 31, 2023 is \$41 (December 31, 2022 - \$490) 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.

Outstanding share data

As at May 12, 2023, the Company has 722,071,831 common shares issued and outstanding, 54,253,334 incentive stock options outstanding with exercise prices ranging from \$0.31 to \$0.87 per share and 25,627,050 warrants outstanding with an exercise price of \$0.85.

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, 2022.

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 three month period ended March 31, 2023 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, 2022.

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 F3 Uranium Corp. at FVTPL for subsequent measurement purposes.

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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.

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.

Impairment indicators of exploration and evaluation assets

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.

Determination of technical feasibility and commercial viability

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.

The determination of technical feasibility and commercial viability of a mineral property requires significant judgement and takes into account, among other factors, a combination of (i) the extent to which mineral reserves or mineral resources have been defined in a definitive feasibility study in accordance with National Instrument 43-101, Standards of Disclosure for Mineral Projects; (ii) the results of any optimization studies and further technical evaluation carried out to mitigate project risks identified in the definitive feasibility study; (iii) the status of environmental permits; and (iv) the status of mining leases or permits.

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, 2022.

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

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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.

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.

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**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, 2022 available on SEDAR at www.sedar.com.