Fission Drilling Increases Indicated Resources by 21% Tonnes & 12.3% Pounds U3O8; Remains on Schedule to Complete Feasibility Study in Q4, 2022

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New resource estimate will be instrumental in updating life of mine and other economics in the Feasibility Study

KELOWNA, Sept. 12, 2022 - Fission Uranium Corp. ("Fission" or "the Company") is pleased to announce the results of an updated independent resource estimate for the Triple R deposit, which includes the R1515W, R840W, R00E, R780E and R1620E zones at its 100% owned, Patterson Lake South (PLS) property in Canada's Athabasca Basin region. 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_3O_8 and a minor decrease in grade from 2.10% U_3O_8 to 1.94% U_3O_8. The new, larger 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.

Ross McElroy, President and CEO for Fission, commented, "Fission's resource growth program has been a resounding success. The increased resource estimate of the Triple R deposit at PLS will play an important role in the calculations used for the feasibility study, the results of which are expected by year end. It's important to note that much of the growth has come from the R840W zone, the majority of which is now classified as Indicated, which will allow for inclusion in the new FS mine plan. In terms of further growth, the deposit remains open in multiple directions, and we do of course have another two mineralized zones along trend which are still classified as primarily Inferred resources."

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

Classification	Zone	Tonnes	Grade ($\%U_3O_8$)	Grade (Au g/t)	Contained Metal	
					U_3O_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	9,000

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.
1. Mineral Resources are reported at a cut-off grade of 0.25% U_3O_8.
2. The cut-off grades are based on price of US$50/lb U_3O_8 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.

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 U3O8. 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.

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_3O_8 (<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.

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 ~3.18 km 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 05, 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 55 m to 100 m. R1515W is the western-most of the zones and is drill defined to ~90 m in strike-length, ~68 m across strike and ~220 m vertical and where mineralization remains open in several directions. R840W is located ~515 m to the east along strike of R1515W and has a drill defined strike length of ~430 m. R00E is located ~485 m to the east along strike of R840W and is drill defined to ~115 m 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 50 m. R780E is located ~225 m to the east of R00E and has a drill defined strike length of ~945 m. R1620E is located ~210 m along strike to the east of R780E, and is drill defined to ~185 m in strike length.

The Company completed and filed a prefeasibility study ("PFS") on November 07, 2019 titled "Pre-Feasibility Study on the Patterson Lake South Property Using Underground Mining Methods, Northern Saskatchewan, Canada". The report summarizes the Pre-Feasibility Study ("UG PFS"), which outlines an underground-only mining scenario for PLS which to date has only considered the R00E and R780E zones.

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.

Patterson Lake South Property

The 31,039 hectare PLS project is 100% owned and operated by Fission Uranium Corp. PLS is accessible by road with primary access from all-weather Highway 955, which runs north to the former Cluff Lake mine.

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

About Fission Uranium Corp.

Fission Uranium Corp. is a Canadian based resource company specializing in the strategic exploration and development of the Patterson Lake South uranium property - host to the class-leading Triple R uranium deposit - and is headquartered in Kelowna, British Columbia. Fission's common shares are listed on the TSX Exchange under the symbol "FCU" and trade on the OTCQX marketplace in the U.S. under the symbol "FCUUF."

ON BEHALF OF THE BOARD

"Ross McElroy"

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Ross McElroy, President and CEO

Cautionary Statement:

Certain information contained in this press release constitutes "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 contained in this press release may include statements which involve known and unknown risks and uncertainties which may not prove to be accurate. Actual results and outcomes may differ materially from what is expressed or forecasted in these forward-looking statements. Such statements are qualified in their entirety by the inherent risks and uncertainties surrounding future expectations. Among those factors which could cause actual results to differ materially are the following: risks related to the Offering, risks related to Fission's limited business history, risks related to the nature of mineral exploration and development, discrepancies between actual and estimated mineral resources, risks related to uranium market price volatility, risks related to the market value of the common shares of Fission, risks related to market conditions, risks related to the novel coronavirus (COVID-19) pandemic, including disruptions to the Company's business and operational plans, risks related to the global economic uncertainty as a result of the novel coronavirus (COVID-19) pandemic and other risk factors listed from time to time in our reports filed with Canadian securities regulators on SEDAR at www.sedar.com. The forward-looking statements included in this press release are made as of the date of this press release and the Company disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as expressly required by applicable securities legislation.

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