Fission Uranium Completes Front End Engineering Design; Commences Detailed Engineering at PLS

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Design work underway to integrate R1515W zone into the PLS mine plan

KELOWNA, Aug. 28, 2024 - Fission Uranium Corp. ("Fission" or "the Company") is pleased to announce it has completed the Front End Engineering Design ("FEED") at its PLS high-grade uranium project in Saskatchewan, Canada. The completion of this crucial development phase includes all geotechnical drilling required for the tailings management facility ("TMF") and underground mine access, including the decline and ventilation shafts. The Company is now transitioning fully into the Detailed Design phase. Additionally, Fission is pleased to announce it has responded to all information requests received from the Ministry ("SK-ENV") regarding its initial draft EIS and has officially submitted an updated draft that includes all feedback received. The EIS permitting process, including a ministerial decision, is expected to conclude in Q4, 2024.

News Highlights

- Completion of FEED development phase at PLS. During this process, mine design has been optimized and updated to include the latest innovations in uranium processing and mine development techniques
- Completion of all geotechnical drilling, including 87 sonic drill holes, required to commence Detailed Design
- Commencement of design to include R1515W zone in the PLS mine plan
- Full transition into Detailed Design
- Submission of all required responses and fully updated draft EIS to SK-ENV

Ross McElroy, President and CEO for Fission, commented, "Fission's expert engineering team continues to make excellent progress at PLS. The completion of the FEED further derisks the project and is a critical step on the pathway to production. Completion of FEED brings the engineering to the level required to support the CNSC application to prepare site and construct a mine or mill. We are now fully transitioning into Detailed Design. In addition, pending assays, the success of this year's resource upgrade drilling at the R1515W zone should allow us to integrate this important high-grade zone into our overall mine plan, which aims to increase mine reserves. I am also delighted to confirm that Fission has submitted a revised draft EIS to the Province, and a Ministerial Decision is expected in Q4 of this year."

Technical Details

Completion of FEED. Fission has updated the processing plant design and underground mine design, including ventilation shafts and tunnel design through the overburden. From the Feasibility Study, the mine design has now been optimized and updated to take into account the latest innovations in uranium processing and mine development techniques. Completion of FEED and updates engineering to the level required to support the CNSC application to prepare site and construct a mine or mill, expected to occur in Q4, 2024.

Geotechnical and 1515W Resource drilling (87 sonic holes and 21 diamond drill holes for a total of 9,605m). Sonic drilling was conducted to gather geotechnical and hydrogeological data to complete Detailed Design at the TMF and the ventilation shafts and decline areas, specifically in the overburden. At the 1515W, the highly successful resource infill program will enable Fission to update the current Inferred Resource to Indicated Resource. Fission is currently investigating Vertical Cutter Mining and its potential application for mining the R1515W zone. With completion of FEED, Fission is transitioning fully to the next phase of engineering, Detailed Design. Of note, the Company is in the process of selecting a lead engineering consultant to head up this important engineering design stage. The Detailed Design phase will build upon FEED design and constructability decisions including tunnel development through overburden using Tunnel Boring technology, ventilation shaft development through overburden using Diaphragm wall technology, and mineral processing using state of the art automation and design concepts.

Environmental Assessment. Fission submitted a revised draft EIS and responses to SK-ENV on July 31, 2024, incorporating feedback from the CNSC, Saskatchewan Ministries, and local rightsholders including CRDN, BRDN, BNDN, and MN-S. SX-ENV has informed Fission that the publishing of the Final EIS for public comment and the subsequent Ministerial decision is expected to occur in Q4, 2024.

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 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 55m to 100 m. R1515W is the westernmost 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 the 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 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 intrusive rocks with varying degrees of alteration. Mineralization is both located within and associated with mafic 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.

Qualified Persons

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.Geo., President and CEO for Fission Uranium Corp., a qualified person.

About Fission Uranium Corp.

Fission Uranium Corp. is an award-winning Canadian uranium project developer and 100% owner of the Patterson Lake South uranium property - a proposed high-grade uranium mine and mill in Canada's Athabasca Basin region. 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" and on the Frankfurt Stock Exchange under the symbol 2FU.

ON BEHALF OF THE BOARD

"Ross McElroy"
Ross McElroy, President and CEO

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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 regarding the future operating or financial performance of the Company 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: market conditions and other risk factors listed from time to time in our reports filed with Canadian securities regulators on SEDAR+ at www.sedarplus.ca. 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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