FORM 51-102F3
MATERIAL CHANGE REPORT

Item 1: Name and Address of Company

Fission Uranium Corp. ("**Fission**" or "**the Company**")
Suite 700 – 1620 Dickson Ave.
Kelowna, British Columbia V1Y 9Y2

Item 2: Date of Material Change

January 9, 2015.

Item 3: News Release

A news release announcing the material change was issued on January 9, 2015 through Marketwired and a copy was filed on SEDAR.

Item 4: Summary of Material Change

Fission announced the results of an independent resource estimate for the R00E and R780E zones at its 100% owned Patterson Lake South (PLS) property in Northern Saskatchewan. This highly significant, high-grade uranium deposit has been named the 'Triple R' deposit.

The Triple R deposit is estimated to contain:

- 79,610,000 lbs U_3O_8 indicated mineral resource based on 2,291,000 tonnes at an average grade of 1.58% U_3O_8, including:
  - High-grade zone of 44,297,000 lbs U_3O_8 based on 110,000 tonnes at a grade of 18.21% U_3O_8
- 25,884,000 lbs U_3O_8 inferred mineral resource based on 901,000 tonnes at an average grade of 1.30% U_3O_8, including:
  - High-grade zone of 13,860,000 lbs U_3O_8 based on 24,000 tonnes at a grade of 26.35% U_3O_8

The current indicated and inferred mineral resources are stated using a cut-off grade of 0.1% U_3O_8.

Item 5: Full Description of Material Change

5.1 Full Description of Material Change

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Ongoing 'Triple R' Resource Growth and Exploration in 2015: Fission is planning to complete large winter and summer drilling programs in 2015, including a $10M, 63 hole (20,230m) winter program expected to begin on January 15th.

Largest Undeveloped Resource in Athabasca Region: This resource estimate places Fission's Triple R deposit in an elite group of world class high-grade uranium deposits of the Athabasca Basin region that includes the McArthur River and Cigar Lake mines. The Triple R deposit now ranks 3rd in size behind the McArthur River and Cigar Lake deposits respectively, which are both currently producing mines and as such represents the largest undeveloped resource in the Athabasca Basin region.

Includes Important Gold Resource: Gold mineralization is associated with the uranium mineralization in the Triple R deposit and is reported as part of the mineral resource:

- 38,000 ounces Au Indicated Mineral Resource based on 2,291,000 tonnes of mineralization at an average grade of 0.51 g/t Au
- 16,000 ounces Au Inferred Mineral Resource based on 901,000 tonnes of mineralization at an average grade of 0.56 g/t Au

Key Highlights

- Strong Confidence in Resource: Approximately 75% of the mineral resource has been classified as an Indicated resource, demonstrating the high level of confidence in the data analyzed and the continuity of the mineralization.
- High-Grade Zone: The R780E zone contains a high-grade domain consisting of an indicated mineral resource of 44,297,000 pounds U_3O_8 based on 110,000 tonnes at a grade of 18.21% U_3O_8 and an inferred mineral resource of 13,860,000 pounds U_3O_8 based on 24,000 tonnes at a grade of 26.35% U_3O_8.
- Shallow: Majority of deposit defined from approximately 60m to 250m depth, exceptionally shallow measured against comparable large deposits in Athabasca Basin region.
- Deposit contained entirely in Basement Lithology

- Strong Growth Potential: Mineralization open in multiple directions and future drilling, including upcoming winter 2015 program, will in part focus on deposit growth.

Summary Tables

Table 1 summarizes the mineral resource estimate by zone and classification. Table 2 shows the sensitivity of the mineral resources to various cut-off grades.

Table 1: Triple R Deposit Mineral Resources as of January 05, 2015

Category	Zone	Sub-Zone	Tonnes	% U_3O_8	g/t Au	Pounds U3O8	Ounces Au
Indicated	R00E	Zone	126,000	1.15	0.15	3,180,000	1,000
	R780E (Main)	High Grade	110,000	18.21	2.77	44,297,000	10,000
		Lower Grade	1,898,000	0.69	0.39	28,763,000	24,000
		Subtotal Main	2,008,000	1.65	0.52	73,061,000	34,000
	R780E (Other Zones)		157,000	0.97	0.67	3,369,000	3,000
Total Indicated			2,291,000	1.58	0.51	79,610,000	38,000
Inferred	R00E	Zone	8,000	3.57	0.59	669,000	-
	R780E (Main)	High Grade	24,000	26.35	3.77	13,860,000	3,000
		Lower Grade	23,000	1.26	0.89	648,000	1,000
		Subtotal Main	47,000	13.93	2.35	14,508,000	4,000
	R780E (Other Zones)		585,000	0.68	0.56	8,797,000	11,000
	Low Grade Halo		260,000	0.22	0.22	1,910,000	2,000
Total Inferred			901,000	1.30	0.56	25,884,000	16,000

Notes:
1. CIM definitions were followed for Mineral Resources.
2. Mineral Resources are reported within a preliminary optimized open pit shell at a cut-off grade of 0.1% U_3O_8. The cut-off grade is based on price of US$50 per lb U_3O_8.
3. Numbers may not add due to rounding.

Table 2: Triple R Deposit Mineral Resources Sensitivity to Cut-Off Grade as of January 05, 2015

Category	**Cut-Off % U_3O_8**	**Tonnes**	**Grade % U_3O_8**	**g/t Au**	**Pounds U_3O_8**	**Ounces**
Indicated						
	0.8	771,000	4.02%	1.09	68,325,000	27,000
	0.2	1,821,000	1.94%	0.61	78,064,000	36,000
	0.1	2,291,000	1.58%	0.51	79,610,000	38,000
	0.05	2,495,000	1.45%	0.47	79,947,000	38,000

Category	Cut-Off % U_3O_8	Tonnes	Grade % U_3O_8	g/t Au	Pounds U_3O_8	Ounces
Inferred						
	0.8	209,000	4.57%	1.53	21,109,000	10,000
	0.2	657,000	1.74%	0.72	25,118,000	15,000
	0.1	901,000	1.30%	0.56	25,884,000	16,000
	0.05	1,186,000	1.01%	0.44	26,331,000	17,000

Notes:

1. CIM definitions were followed for Mineral Resources.
2. Mineral Resources are reported within a preliminary optimized open pit shell. The cut-off grade of 0.1% U_3O_8 is based on a price of US$50 per lb U_3O_8.
   Numbers may not add due to rounding.

Estimation Methodology

RPA Inc. ("**RPA**") has estimated the Triple R Deposit mineral resources using drill hole data available as of January 5, 2015, which includes all drilling on the property up to hole PLS14-298. Estimated block model grades are based on chemical assays only. All mineral resources reported in Table 1 are within a preliminary optimized open pit shell generated in Whittle software. A relatively minor amount of mineralization was not captured by the Whittle shell. No mineral reserves have been estimated at the project.

A set of cross-sections and level plans were interpreted to construct three-dimensional wireframe models for a number of mineralized zones at a minimum grade of 0.05% U_3O_8. Wireframes of the High Grade domain were created at a minimum grade of approximately 5% U_3O_8. The High Grade Zone consists of several lenses within the Main Zone, the largest continuous zone within the R780E area. Prior to compositing to two metre lengths, high U_3O_8 assays were cut to 55% in the High Grade domain, to 10% U_3O_8 in all other domains, and to 7% U_3O_8 outside the wireframes, designated as Low Grade Halo.

Block model grades were interpolated by inverse distance cubed. Density values were estimated from more than 2,000 measurements to be: 2.25 t/m^3 for the R00E Zone, 2.32 t/m^3 for the Main Zone and other zones in the R780E area, 2.35 t/m^3 for the High Grade Zone, and 2.39 t/m^3 for the Low Grade Halo. Classification into the indicated and inferred categories was guided by the drill hole spacing and the continuity of the mineralized zones.

Qualified Person – Mineral Resource: The mineral resources for the PLS Project disclosed in this press release have been estimated by Mr. David Ross, P.Geo., an employee of RPA and independent of Fission. By virtue of his education and relevant experience Mr. Ross is a "Qualified Person" for the purpose of National Instrument 43-101. The mineral resources have been classified in accordance with CIM Definition Standards for Mineral Resources and Mineral Reserves (May 2014). Mr. Ross, P.Geo. has read and approved the contents of this press release as it pertains to the disclosed mineral resource estimate.

Geology and Mineralization

Uranium mineralization at PLS has been traced by core drilling over 2.24km of east-west strike length in four separate mineralized "zones". From west to east, these zones are; R600W, R00E, R780E and R1620E.

The discovery hole of what is now the Triple R uranium deposit was announced on November 05, 2012 with drill hole PLS12-022, from what is now considered part of the R00E zone. Through successful exploration programs completed to date, it has evolved into a large, shallow, basement hosted, structurally controlled high-grade uranium deposit. The Triple R deposit consists of the R00E zone on the western side and the much larger R780E zone further on strike to the east. The R00E and R780E zones have an overall strike length of approximately 1.2km with the R00E measuring approximately 125m in strike length and the R780E zones measuring approximately 900m in strike length. A 225m gap separates the R00E zone to the west and the R780E zones to the east, though sporadic narrow, weakly mineralized intervals from drill holes within this gap suggest the potential for further significant mineralization in this area. The R780E zones are located beneath Patterson Lake which is approximately six metres deep in the area of the deposit. The entire Triple R deposit is covered by approximately 50 m of overburden.

Mineralization remains open along strike both to the western and eastern extents. Mineralization is both located within and associated with a metasedimentary lithologic corridor, bounded to the south by the PL-3B basement Electro-Magnetic (EM) Conductor.

Further Technical Details

A National Instrument 43-101 Technical Report on the Triple R deposit mineral resource estimate will be filed on SEDAR within 45 days.

Updated maps and files can be found on the Company's website at http://fissionuranium.com/project/pls/resource estimate.

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 and passes through the nearby UEX-Areva Shea Creek discoveries located 50km to the north, currently under active exploration and development.

The technical information other than the resource estimate 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 COO for Fission Uranium Corp., a qualified person.

5.2 Disclosure for Restructuring Transactions

Not applicable.

Item 6: Reliance on subsection 7.1(2) of National Instrument 51-102

Not applicable.

Item 7: Omitted Information

Not applicable.

Item 8: Executive Officer

For further information, please contact Ross McElroy, President & COO of the Company at 250-868-8140.

Item 9: Date of Report

January 19, 2015.