

# OCGC Seminar

## Integrated Geophysical and Geochemical Investigation of the Patterson Lake Corridor, Athabasca Basin: Saskatchewan

*Followed by:*

## Introducing Women Geoscientists in Canada

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Thursday, January 24<sup>th</sup>, 2019 11:30 AM

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3120 Herzberg Building

Jeudi le 24 janvier 2019, 11h30

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Discovery of the Triple R and Arrow deposits plus several occurrences in the Patterson Lake Corridor (PLC), outside and along the southwestern margin of the Athabasca Basin, has opened up a new uranium district in the basin. Known ore lenses extend several hundred metres below the unconformity, within metamorphosed and altered mafic to ultramafic intrusions and orthogneisses of the Taltson Domain. Although hosted in reactivated fault structures, the atypical basement geology and depths of mineralization below the unconformity challenge the traditional unconformity-related deposit model.

To address this, the Geological Survey of Canada's Target Geoscience Initiative (TGI) uranium fluid pathways collaborative government-industry-academia research project is examining the role of long-lived reactivation of crustal-scale shear zones in driving fluid flow to sites of uranium mineralization. The research is integrating geochronological, geochemical, geophysical and structural studies to both constrain the multi-phase deformational and alteration histories of the PLC basement, and quantify the expressions of fertile alteration along the reactivated fluid pathways. This presentation aims to give an overview of the uranium fluid pathways project with a focus on the on-going geophysical activities.

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