

OCGC SEMINAR

Provenance vs process: Insight from combined radiogenic and stable Sr isotopes

Dr. Ross Stevenson
Professor at Geotop
Université de Québec à Montréal

Thursday, January 17th, 2019, 11:30 AM
University of Ottawa
Advanced Research Complex
Room 233

Jeudi le 17 janvier 2019, 11h30
Université d'Ottawa
Advanced Research Complex
Pièce 233

Abstract:

Radiogenic Sr isotopes ($87/86\text{Sr}$) have long been used for geochronological and isotopic provenance studies. Advances in mass spectrometry now permit the determination of differences in the stable isotope ratios of Sr ($88/86\text{Sr}$) produced by mass dependent fractionation as a result of geological and biological processes. The advantages of combining the stable and radiogenic isotopes of Sr are discussed via a series of wide-ranging studies including agro-food provenance, hydrothermal fluids and primitive Archean barites. These studies indicate that the addition of stable Sr isotopes enhances our understanding of surface processes such as weathering and soil development as well as the evolution of hydrothermal fluids.

Dr. Ross Stevenson: *Ross Stevenson is a professor at Geotop and the department des Sciences de la Terre et de l'atmosphère de l'Université de Québec à Montréal (UQAM) specializing in the application of isotope geochemistry to studies of mantle and crustal evolution, paleoceanography and sediment provenance studies. His work has ranged from the crustal evolution of the Western Superior Province, to the identification of the ancient crust of the 3.8 Ga Nuvvaggitua Greenstone belt of Quebec, the paleo-circulation of the North Atlantic and Arctic Oceans, and the geochemical/isotopic relationship between terroir and agro-food produce.*



Geological Survey of Canada

LOGAN CLUB
CLUB LOGAN
Commission géologique du Canada



Carleton
UNIVERSITY