

**ABSTRACT**

**Title:** Fluid Inclusion Study of Calcite and Celestine in DGR-1 and DGR-3 Drill Core Samples from the Bruce Nuclear Site, Southern Ontario  
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**Abstract**

As part of on-going research and development activities performed on rock core samples from the Bruce Nuclear Site, which has already been the subject of detailed site investigations, vein-filling calcite in drill core samples from the Devonian Bois Blanc and Silurian Bass Islands Formations have been dated by the U-Pb LA-ICPMS and ID-TIMS methods (Davis, 2016). From five of these dated samples, separate undated pieces were later sent to the University of Bern for fluid inclusion analysis.

The aims of the fluid inclusion study were to (1) place constraints on the temperature of formation of the calcites and (2) estimate the salinity of the parent fluids from which the calcite precipitated. These constraints should aid in enhancing existing understanding about the geological events to which the U-Pb ages apply.