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# 3D Geological Modelling in Saskatchewan

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## Abstract

The recently opened Saskatchewan Geological Survey 3D Modelling Centre is an investment in leading edge technology which is propelling Saskatchewan geoscience forward and further highlights our commitment to “Innovative Mapping”. The goal of the 3D modelling program is to provide a robust geological framework to integrate and analyze a spectrum of datasets. This approach, in the 3D realm, improves understanding of ore and petroleum systems thereby facilitating the responsible exploration and development of the Province’s natural resources. These models, which are generally regional in scale, are designed to enhance project-scale models produced by industry.

Using Paradigm’s™ GOCAD® software, several 3D models have been produced including those for: the uranium-rich Athabasca Basin of northern Saskatchewan; potash units in southern Saskatchewan; Bakken oil pools in the Williston Basin and the sub-Phanerozoic base metals district west of the Flin Flon mining camp among others. This innovative work has resulted in several international collaborations.

## Biography of the Presenter

Sean Bosman, P.Geo. received his Honours B.Sc. in Earth Sciences in 2003 and his M.Sc in Geology in 2006, both at the University of Western Ontario. For the past six years he has worked as a Precambrian research geologist for the Saskatchewan Geological Survey, Saskatchewan Ministry of the Economy. His work is focused on improving the understanding of the ore system processes that controlled the formation of the high-grade uranium deposits in the Athabasca Basin. This work includes revising the stratigraphy of the Athabasca Basin and modelling all available data in 3D.