

Project 2005-10: New exploration model for Blake River, Abitibi Subprovince

The Blake River Group of the Abitibi Subprovince, host to the Noranda mining camp, is internationally recognised for its volcanogenic massive sulphide deposits. A new model for the geological evolution of the Blake River Group focuses on the presence of a megacaldera and several nested calderas.

The Noranda caldera is well known from previous work for its important volcanogenic mineralisation. A new interpretation of the distribution of mafic to intermediate dikes for the entire Blake River Group emphasises a concentric and radial organisation as the basic framework of the new Misema megacaldera and the New Senator Caldera.



Delineation of the main Misema Caldera and the New Senator and Noranda imbricated calderas superimposed on the new interpretation of the architecture of the mafic dikes in the Blake River Group, Abitibi Subprovince.

The proposed model of nested

calderas has a direct effect on exploration strategies. Consequently, the boundary faults of the Misema and New Senator Calderas become prime exploration targets.

Summary: Project 2005-10	
Objectives	• To confirm the new Pearson model for nested calderas and to establish the impact on exploration.
Results	 New delineation of the New Senator Caldera; New interpretation of the synvolcanic dike system leading to the definition of the Misema Caldera; Delineation of the geometry of several volcanic centres; New synvolcanic faults associated with the New Senator Caldera.
Tools and Innovations	Development of a new exploration model for Blake River.
Note	This project continues in 2006-2007