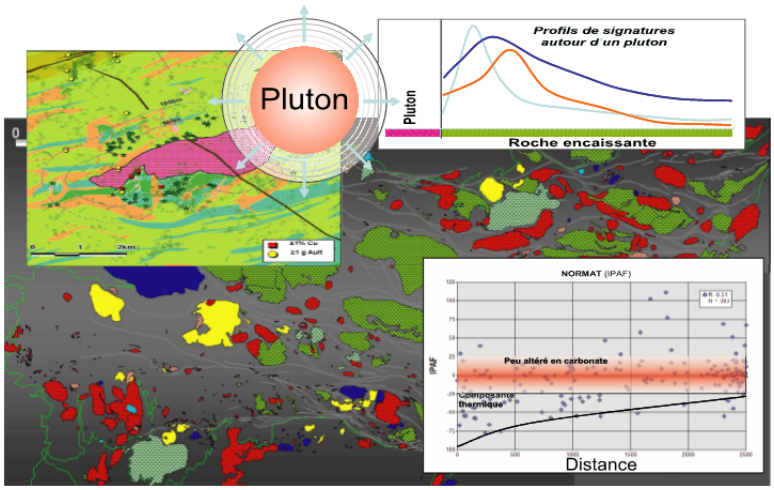
CONSOREM
Consortium de recherche en exploration minérale

Project 2006-2: Analysis of fertility indicators around the plutons of the Abitibi Subprovince

Project 2006-2 is a study of the indicators of mineralisation associated with plutonic bodies. It is a follow-up to project 2005-1. The tool for the analysis of spatial proximity developed during the 2005-2006 program was used to study all the available indicators along the edges of every pluton in the Abitibi. The new analytical tool helped generate a comprehensive database from continuous variables (such as the magnetic field) and discontinuous variables (such as descriptive data about alteration).

A principal component analysis and the use of neural networks on these indicators allowed associations to be made between the type of plutons and the characteristics of the mineralisation. For example, the method helped identify the presence of 21 new synvolcanic plutons in the Abitibi with a potential for VMS mineralisation.



An example for the use of the software for analysing spatial proximity and new map of plutons in the Abitibi, where plutons are classified using indicator analysis.

Summary: Project 2006-2	
Objectives	• To interpret continuous and discontinuous indicator variables near plutons of the Abitibi Subprovince. • To characterise the fertility of the plutons in the Abitibi from their environmental indicators. • To identify the plutons with favourable characteristics for mineralisation.
Results	• Use of a new spatial analysis software (created at CONSOREM) ; • Integration of all indicators into one database for spatial analysis ; • New map for classifying plutons in Abitibi ; • Criteria for recognising fertile plutons and searching for comparable ones.
Innovations	• A decision support tool for the recognition of fertile plutons; • Software for spatial proximity analysis.