2007-11: Development of a targeting tool using neural networks

A targeting method based on the neural network method was developed and used successfully in several previous CONSOREM projects. However, the methodology was difficult to implement in exploration in a practical way. Therefore, this project aimed to develop a software tool that uses the concepts developed by CONSOREM to facilitate the targeting of the various mineralisation contexts. This project actually represents in concrete terms the transfer of CONSOREM research results to industrial users.

Thus, a new software tool was created for the transfer and processing of SIG data (MapInfo or ArcGIS data) to neural networks, as well as a fuzzy logic processing module. Among other things, this software tool allows the generation of raster maps from vector files of geology, faults etc. It also allows the standardisation of existing raster maps.

A metallogenic aid is integrated into the program (figure attached). The aid guides the user to select the layers necessary to achieve robust models of mineral potential consistent with the various desired substances.
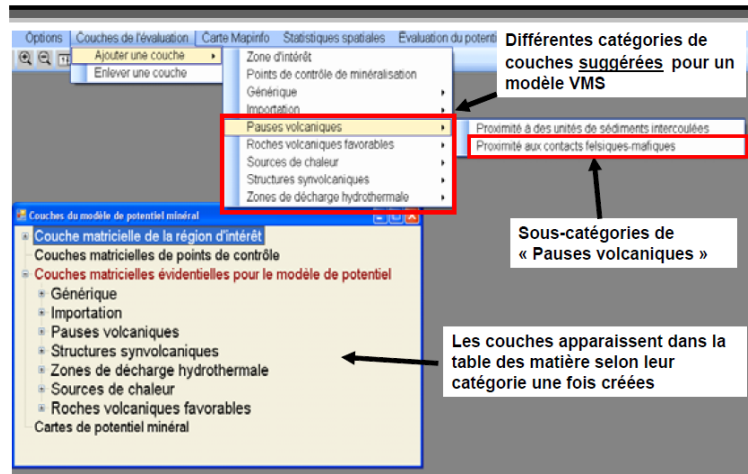
In addition to developing a methodological approach for targeting mineralisation, the software tool allows multiple transformations and spatial processing useful for establishing relevant relationships between several data sources.

Interface of the mineral potential evaluation software with metallogenic aid (VMS).

Project 2007-11: Summary	
Objectives	• To develop a tool for creating exploration targets based on neural networks.
Results	• Mineral potential evaluation software using neural networks and fuzzy logic with metallogenic aid; • Transfer of research results to industrial users.
Innovations	• New evaluation software for mineral potential with integrated metallogenic aid.