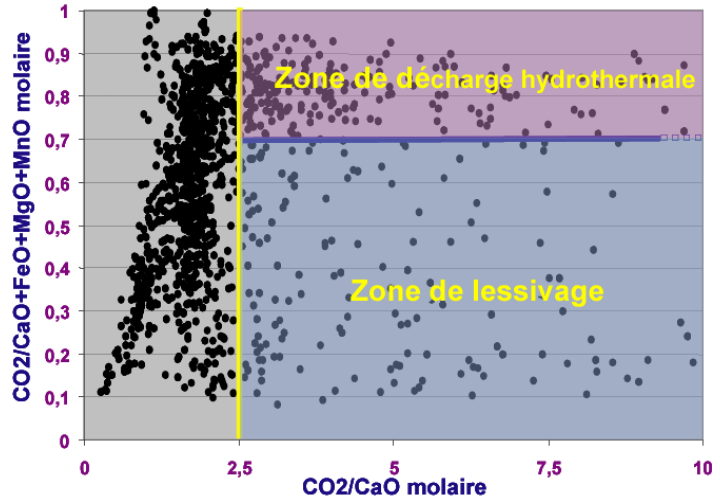


**Project 2006-4: Zoning and typology of carbonatation for Au-BM mineralisation — phase 2**

The main objective of this project is to develop a tool for the interpretation of the typology of carbonatation; a tool that is reliable and practical for exploration.

In the first phase of the project (2005-4), two new indices were proposed and adopted. The indices can be used to characterise the carbonatation from whole rock geochemical data. In the 2006-4 phase, the use of these indices was validated for felsic volcanic rocks. In addition, a new diagram showing the relationship between both indices allows us to distinguish between carbonatation systems of volcanic origin and carbonatation systems of orogenic origin. The diagram is useful in analysing databases from a specific area by isolating the samples of greatest interest depending on the mineralisation context.



The use of the indices and the carbonatation diagram was tested for several orogenic gold and Mattabi type VMS mineralisation contexts in the Abitibi.

*An example of the use of the carbonatation diagram showing the various alteration zones for volcanogenic mineralisation in the Bouchard-Hébert area.*

<b>Summary: Project 2006-4</b>	
<b>Objectives</b>	<ul style="list-style-type: none"> <li>• To validate the lithogeochemical indices for the carbonatation of felsic volcanics and for volcanogenic mineralisation.</li> <li>• To integrate new case studies to validate the lithogeochemical approach to carbonatation.</li> <li>• To establish a carbonatation map across the Abitibi integrating regional data (mineralisation, structures, metamorphism) with the various lithogeochemical indices in order to target gold and volcanogenic mineralisations.</li> <li>• To compare carbonatation related to volcanogenic and orogenic systems.</li> </ul>
<b>Results</b>	<ul style="list-style-type: none"> <li>• Carbonatation diagram for:                             <ul style="list-style-type: none"> <li>- characterising the carbonate species present based on lithogeochemistry;</li> <li>- differentiating volcanogenic carbonatation and the carbonatation associated with orogenic gold mineralisation;</li> <li>- differentiating hydrothermal discharge zones in a VMS context.</li> </ul> </li> </ul>
<b>Innovations</b>	<ul style="list-style-type: none"> <li>• New methodological tool for targeting based on carbonatation.</li> </ul>