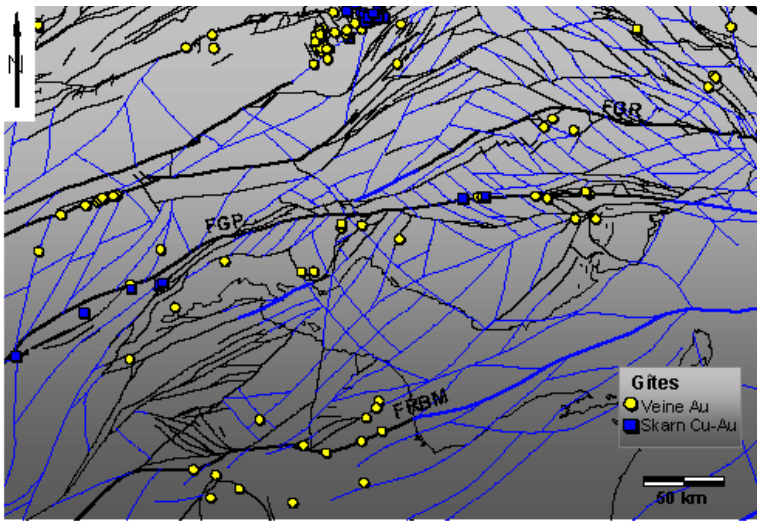
CONSOREM
Consortium de recherche en exploration minérale

Project 2004-16: Reconstruction of tectonic paleopressure in the Gaspe Region with implications for the exploration of gold mineralisation and Cu-Au skarns

Several Gaspe faults, the best known of which is the Grand-Pabos Fault, are spatially associated with several orogenic gold deposits. Paleopressure modelling along the faults could have implications for exploration. The geomechanical modeller UDEC was used in this context, trying to target structurally controlled late-gold mineralisations.

The project has established geomechanical parameters for rock units in the sector and several models were tested: a) Riedel system, b) movement along major faults, c) movement along major and secondary faults, d) hierarchical faults with brittle rheology and e) retro-deformed Grand-Pabos fault. Depending on the model used, several new favourable structures were identified and one favourability analysis by superposition of criteria from every model was proposed for the Gaspe region.



Mineralisations associated with faults (FGP: Grand-Pabos Fault; FRBM: Rocky-Brook Millstream Fault).

One of the main results of the study shows that the potential zones of gold mineralisation are mostly located along weak to moderate pressure zones that are located along the edges of high pressure zones.

Summary: Project 2004-16	
Objectives	• To identify low-pressure zones along major faults favorable for gold deposits in the Gaspe Region.
Results	• Successful application of the geomechanical modeller UDEC in the Gaspe area. • New interpretation of lineaments from lithological and geophysical data from the Gaspe Region and addition of new lineaments. • Targeting defined in high pressure areas, particularly in zones of weak to moderate stress bordering on a high-pressure zone.
Tools and Innovations	• New tool for mineral exploration in the Gaspe region.
Special Collaboration	• Michel Malo, INRS.