Simulating the Geometry of a Granite Hosted Ore-body

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This paper shows how plurigaussian simulations can be applied to a structurally controlled granite hosted ore-body to simulate its geometry. The granite bodies have great textual variability ranging from massive bodies tens of metres across to pegmatic dykes or narrow stringers which are concordant with the main foliation. Geological interpretation of the intrusives from diamond drilling has proved to be highly unreliable and alternative modelling methods are therefore being sought.

This paper focuses on incorporating what is known about the geology into the geostatistical framework. More than 15 rock types exist in the ore-body. Choosing how to regroup them is one of the key steps in the study. Most of these rock types are metamorphosed sedimentary rocks that occur in a certain order, whereas others are intrusive. It is important to respect these relationships. Lastly it is essential to be able to generate bodies that have the right morphology.