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**Title:** GEOMETALLURGY - LINKING THE GEOLOGY AND THE BLOCK MODEL TO METALLURGICAL PROCESSING AND PRODUCTION PLANNING

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**Author 1 (CONTACT AUTHOR)**

Name: Jean Richardson

Org: SGS Minerals Services

Country: Canada

**Author 2**

Name: Glenn Dobbie

Org: SGS Minerals Services

Country: Canada

**Author 3**

Name: Chris Martin

Org: SGS Minerals Services

Country: Canada

**Author 4**

Name: Leo Flores

Org: SGS Minerals Services

Country: Canada

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**Abstract:** Geometallurgy is the geologically informed selection of a number of test samples to determine metallurgical parameters and the distribution of these parameters through an orebody using an accepted geostatistical technique to support process modeling. The distribution can be influenced by the geological structure of the ore body, in that the lithology can have an affect on some of the parameters. It quantifies the variability of the ore deposit in terms of process parameters such as ore hardness, flotation kinetics and leach kinetics. The data is then applied to the deposit block model or the mine plan, typically through use of geostatistics. This approach integrates with the traditional use of block models for geology and grade-based mine planning exercises and has been proven to allow the datasets so generated to be carried forward into production and operation. Geometallurgy reduces the technical risks associated with metallurgical process selection, mill configuration and mine planning. Examples will include production forecasting data from the Escondita Cu mine and the mill design for Ruby Creek Mo project, BC, Canada.