

Retro-conciliation of mid and short term models

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SUMMARY

Resource models are commonly used in feasibility studies and final pit designs, reason why they are also called long-term models. These models have been built to deliver an acceptable precision level of the interest variable in global terms (periods of one or several years).

To increase the precision level, new information is required in the form of production infill drill holes for mid and short term model construction. This process must respect the principles of traceability, transparency and materiality of the long-term model.

The use of information from the production stage (bench mapping, trenches, blast holes, etc.) has some difficulties that must be studied in order to assure that no significant biases are present between drill hole grades and production information. On the other hand, resource estimation plans have to be modified to consider the incorporation of the additional information. A model that integrates the different information gives alerts of problematic stages and notions of possible solutions.

The following study evaluates the prediction level of different techniques that involve geological modeling and grade estimation by using past information. The technique considers successive increments of information in which geology and estimated values are updated. The prediction level is evaluated between each updated model and the reality generated with blast hole information. Additionally, the economic benefit generated by the increasing of precision and decreasing of ore-waste misclassification of the models is evaluated by the use of advanced drilling from the production stage.