



isatis.neo
GEOSTATISTICS MADE ACCESSIBLE

Mining
edition

ISATIS.NEO RESOURCES WORKFLOW

Quickly generate resource estimates and simulations

Resources Workflow is an integrated application in the **Mining Edition of Isatis.neo**, Geovariances' new-generation software in geostatistics tailored for the Mining industry. It offers the industry-standard in geostatistics for Mineral Resource Estimation and Simulation in a simplified and secure approach that streamlines mineral resource and recoverable resource estimation.



Why Resources Workflow?

- **All-in-one workflow.** All the tools needed to perform data analysis, resource estimation and uncertainty analysis are merged into a single geostatistical workflow.
- **Ease of use.** Simplified access to geostatistics, even for non-experts. **Fast workflow-based solution** walking users through the estimation process, combined with powerful parallelized algorithms.
- **Testing made easy.** Easy definition of **multiple estimation scenarios** from different parameters.
- **Fast and safe model updating.** **Automated workflow** allowing a re-run of the whole estimation process with one mouse click, for daily, weekly or monthly estimate updates.
- **Smart resource reporting.** **Flexible reporting facilities** fully compliant with mining reporting codes' requirements.
- **Rapid audit and desktop review.** **Auditable and traceable estimation process** to quickly verify if the estimates make sense and identify the main risk contributors.

AN OPTIMIZED AND SIMPLIFIED WORKFLOW FOR MINERAL RESOURCE ESTIMATION, GRADE CONTROL AND RECONCILIATION

DATA HANDLING AND QUALITY CONTROL

- **Analyze and validate input data** through interactive and dynamically linked statistical representations (histograms, swath plots, cross plots).
- Achieve **sample length regularization**.
- Optimize the **declustering** window size.
- **Perform structural analysis** simultaneously on raw and Gaussian transformed grades.

RESOURCE ESTIMATION AND SIMULATIONS

- Automatically get **well-fitted multivariate/multi-directional variogram models**.
- Take into account **support and information effects**.
- Define nested neighborhoods. Optimize kriging neighborhood with **Kriging Neighborhood Analysis**.
- Estimate your resources at local scale with **univariate or multivariate Ordinary Kriging**.
- Estimate resources at global scale with **Uniform Conditioning (UC), Localized Uniform Conditioning (LUC)**, either univariate or multivariate.
- **Assess the risk associated to your estimates** with Turning Bands conditional simulations and automated simulation post-processing.
- **Control the quality of the estimates** through various statistics: histograms, swath plots and cross plots between data and estimates.

RESOURCE REPORTING

- **Report tonnage, metal, grade and/or benefit** for each defined cutoff, by domain, below the topography or inside the pit.
- Define your own **Resources Classification** compliant with international codes and report your resources by category (Measured, Indicated and Inferred).
- Compute **grade-tonnage curves**.
- **Produce your report and store your modeling parameters on the fly** as your project progresses thanks to an integrated word processor.

RESOURCE MODEL UPDATING AND REVIEWING

- **Save estimation workflows** and related parameters and easily re-run them as new data come in.
- **Reproduce** estimation results. **Review** models in an effective way.

GRADE CONTROL AND RECONCILIATION

- **Quickly build and update short-term models** from production data using variogram models and neighborhood parameters defined for the long-term estimate.
- **Perform reconciliation** between the short-term and the long-term model.
- **Generate mining polygons based on multivariate criteria** (grades, lithology, categorical variables).
- **Easily assign a destination to the material** (ore, waste, stockpile).

Resources Workflow is available into the Mining Edition of Isatis.neo.



Geovariances
Where no one has gone before

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