



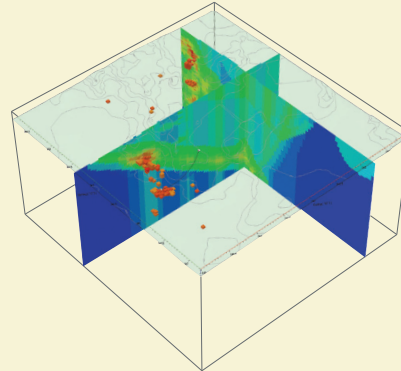
GOCAD Mining Suite Targeting Workflow

Earth Modelling and 3D-GIS Solutions for Mineral Exploration

Summary

The Targeting Workflow provides 2D and 3D mineral potential modelling solutions for exploration geoscientists. Multiple exploration criteria can be combined using a variety of knowledge and data-driven methods to highlight prospective ground. Quantitative analysis and advanced visualization tools are used to identify and rank drillhole targets. A unique workflow interface dynamically guides the user through an expert process yielding reliable and repeatable results for better, faster decision making.

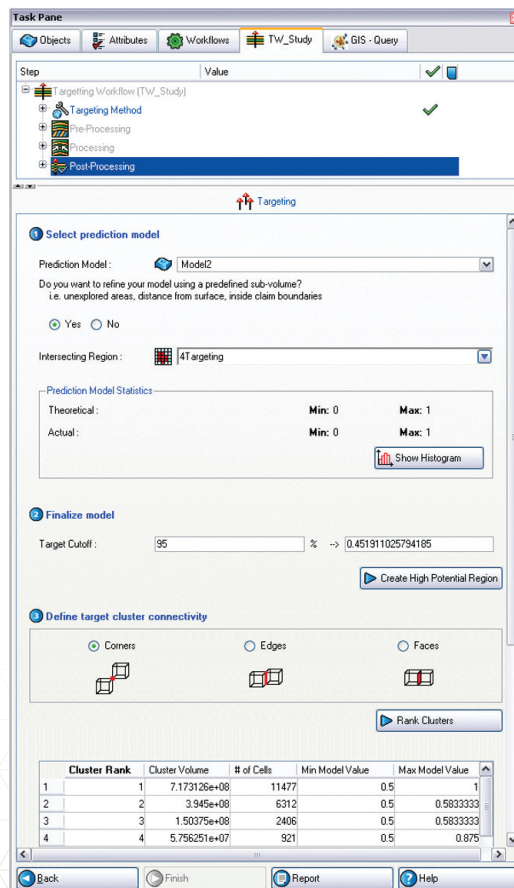
GOCAD® Mining Suite Targeting Workflow is an extension of Paradigm™ GOCAD®, the world's most sophisticated geological modelling platform, adapted specifically for the mining industry and available exclusively from Mira Geoscience.



The workflow is designed to guide users through the mineral exploration targeting expert thought process.

This is a step-by-step approach:

1. Choose a modelling approach as knowledge or data-driven
2. Identify a series of exploration criteria, represented as evidential properties on a 2D or 3D grid object, that characterizes prospective ground for a specific ore deposit model
3. Choose a prediction model space as a subset of the exploration volume
4. Reclassify exploration criteria into binary or multi-class properties depending on the chosen modelling approach
5. Quantitatively combine exploration criteria into high potential areas for mineralization in the form of binary classes (Boolean Logic), mineral potential indices (Index Overlays) or posterior probabilities (Weights-of-Evidence)
6. Analyze outputs, identify and rank drillhole targets



Key Features

Modelling Approaches

- » Boolean Logic
- » Index Overlay
- » Multi-Class Index Overlay
- » Weights-of-Evidence

Model Definitions

- » 2D and 3D rectilinear grids
- » 2D and 3D stratigraphic grids
- » Automated generation of prediction model volumes based on the spatial distribution of evidential properties

Evidential Properties

- » Support for scalar properties
- » Support for binary, multi-class (discrete) and continuous properties

Reclassification Methods

- » Cut-offs and ranges
- » Manual, percentiles and quantiles
- » Contrast curves (cumulative and non-cumulative cut-off intervals)
- » Automated Jenk's Natural Breaks

Pre-combination of Evidential Properties

- » Available for Boolean Logic, Index Overlay and Weights-of-Evidence models
- » Based on Boolean operators

Weights and Scores

- » Defined manually from expert knowledge for Index Overlay methods
- » Automatically computed for Weights-of-Evidence models

Prediction Model Generation

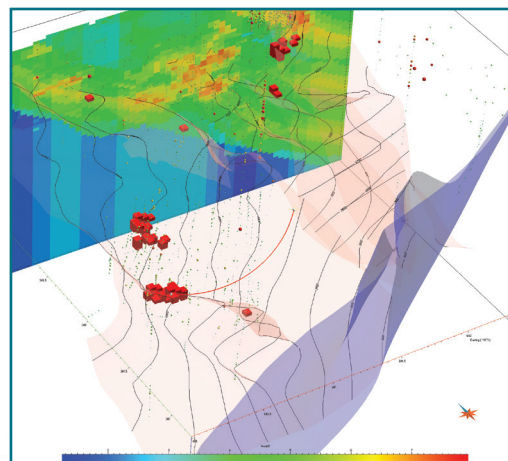
- » Allows for generation of several prediction models within a given workflow study
- » Based on a user-defined list of evidential properties

Targeting

- » Allows for refinement of prediction models by intersecting with other sub-regions (e.g. untested ground)
- » Reports on prediction model statistics
- » Creates high potential regions (groups of cells) based on prediction model cut-off values
- » Isolates and ranks clusters of high potential cells
- » Spreadsheet-like display of clusters and individual cells dynamically linked with the 3D visualization
- » Creates a cluster centroid and drillhole target list as visual objects

Workflow Benefits

- » Increased productivity
- » Ease of use
- » Repeatability
- » Knowledge transfer
- » Audit trail via automatic workflow study report generation



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...modelling the earth