

# GEMS RESOURCE EVALUATION CONFIGURATION

**OVERVIEW:** Put the power of GEMS' Resource Evaluation Configuration to work for you. This configuration is a fully integrated, easy-to-use Windows-based system that combines numerical block modelling with the data management and 3D solids modeling tools in the Advanced Exploration Configuration. As GEMS' most comprehensive exploration package available, the Resource Evaluation Configuration evaluates a variety of deposit environments by providing a full range of block model creation and interpolation techniques. With this useful system, you can build and evaluate different economic models and base your mine plans on a variety of market conditions.

## BUILD SUCCESS WITH BLOCK MODELS

Are you aiming to maximise your project's profitability? With the Windows-compliant advantage of the GEMS Resource Evaluation Configuration, you can do just that – with accurate, unbiased block models of your ore deposit. Geological estimation methods, such as inverse distance, and ordinary and indicator kriging, can be used to interpolate multi-element values. With the GEMS Resource Evaluation Configuration, you have full control of the interpolation process to account for anisotropy, geological domains and anomalous grade values.

Not only does the Resource Evaluation Configuration provide you with comprehensive volume, tonnage and grade reports, it also gives you a cost-based economic evaluation of your deposit. When it comes to mine planning, GEMS interfaces seamlessly with Whittle, so you can determine the most cost-effective design for the highest return on your investment. Further, you can interactively plan and schedule underground or open pit mining volumes to meet production targets – so you can keep your project on time, and on budget.

## COMBINING SOLIDS, SURFACES AND BLOCK MODELS

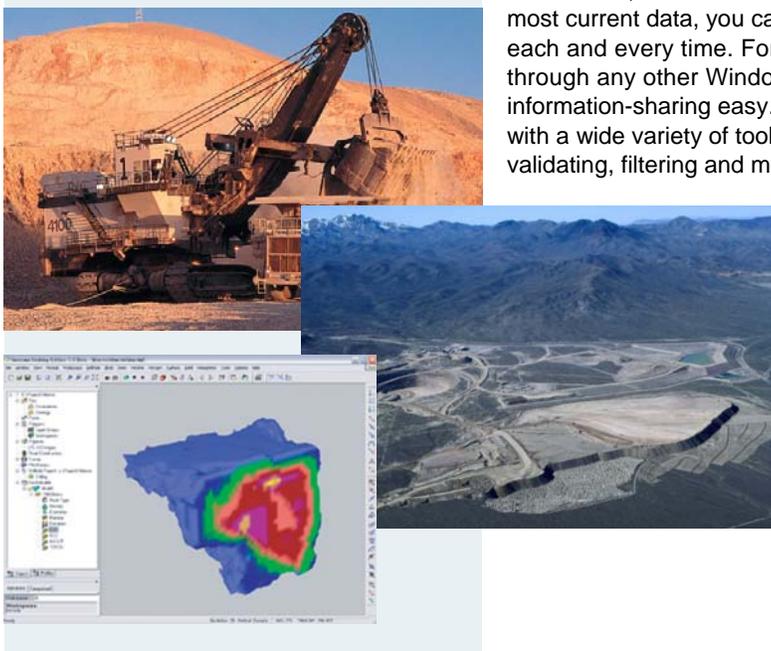
Give your project an immediate advantage with the GEMS "needling" process, which allows you to quickly determine your reserves. Needling accurately differentiates the proportion of each solid as it intersects the blocks of a block model, providing you with weighted tonnage and grade estimates for each rock type. This approach to resource calculations also provides great flexibility for reporting reserves. Users can set up orders of precedence for reporting between pit phases, on selected levels and for various grade ranges. For underground development, you can calculate resources within stopes or determine dilution for planned and "as-mined" excavations.

## OPEN DATABASE FOR OPTIMAL EFFICIENCY

Efficient data management and analysis is essential for mine planning and production. GEMS' Windows-based database makes it easy to achieve this by providing each of the members on your team with simultaneous access to project information, no matter where they are. Because you're always working with the most current data, you can rely on your output and analyses for complete accuracy, each and every time. For ultimate flexibility, you can access the open database through any other Windows-based program, making reporting, graphing and information-sharing easy. The Resource Evaluation Configuration comes complete with a wide variety of tools for entering, digitising, importing, storing, reporting, validating, filtering and manipulating your spatial data.

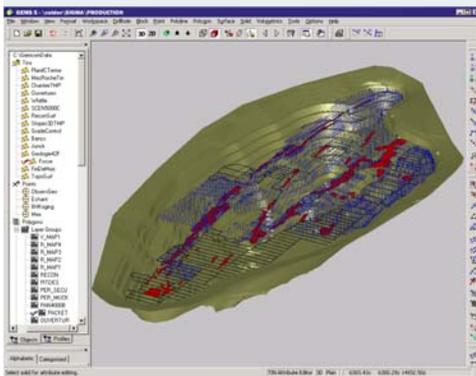
As always, GEMS makes it easy to bring your 3D pictures or reports into any Windows-based document, giving you the power to create reports and presentations that deliver impact.

Whether you're mining veins, massive or disseminated sulphides, layered deposits or aggregates, GEMS has the power and flexibility to create block models you can rely on for sound business decisions.



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To find out more about how your operation can benefit from the GEMS Resource Evaluation Configuration, contact us at [info@gemcomsoftware.com](mailto:info@gemcomsoftware.com), or visit our web site at [www.gemcomsoftware.com](http://www.gemcomsoftware.com).



## FEATURES

### Database Management

- ODBC compliance
- Compatibility with Microsoft Access® and SQL Server®
- Import / merge options for ASCII files
- Data extraction using selection criteria
- Data validation tools for drillhole data
- Comprehensive filtering options
- Simple or custom report generation
- Simple and conditional data manipulation

### Data Analysis

- Histograms and frequency distribution analysis
- Scattergrams
- Regression analysis
- Log and probability graphs
- Linear and 3D semi-variograms

### Plane Plot Creation

- Cross-sections of any data object, including block models

### Compositing

- Complete GEMS compositing toolbox
- Multiple options for handling missing sample values
- Additional weighting field option

### Block Model Features and Display

- Display of block models as values, 3D "cubes" or 2D cell outlines
- Display of data from extraction files as 3D point symbols and/or values
- Create regular models with unlimited dimensions
- Interactive editors allow for updates to polygons, rock types, economic data or any block model
- Use polygonal, Laplace, inverse distance or kriging routines to interpolate models or grids
- Control your interpolation using rock type constraints, variable sample selection, anisotropy and choice of semi-variogram
- Model density, grades, rock types and economic values or manipulate these to produce equivalent grade models
- Use mining costs, block grades, product revenues and recoveries to construct accurate economic models

- Colour coded block display
- Logical filters (such as rows, columns, grade ranges, etc.)
- Spatial filters (such as within solids, between surfaces, etc.)

### Volumetrics and Reserves Reporting

- Analysis of solids volumes
- Unique "needling" process for quickly calculating precise volumes within and between solids and surfaces
- Custom reserves report formats

### 3D Modelling and Visualisation

- Points, status lines, polylines and drillholes displayed in 3D
- View orientation by rotation, panning and zooming
- Underlay plots with bitmaps as 2D reference
- Solids creation from polygons, points and lines
- Control of solid generation with tie lines
- Extrusion of lithological polygons into solids
- Intersections/unions of solids
- Clipping of solids using surfaces or polygons
- Solids/surfaces contoured in any orientation
- Surface creation using polylines or points
- Clipping of surfaces using other surfaces
- Minimum or maximum of two surfaces
- Transparent or smooth solids/surfaces