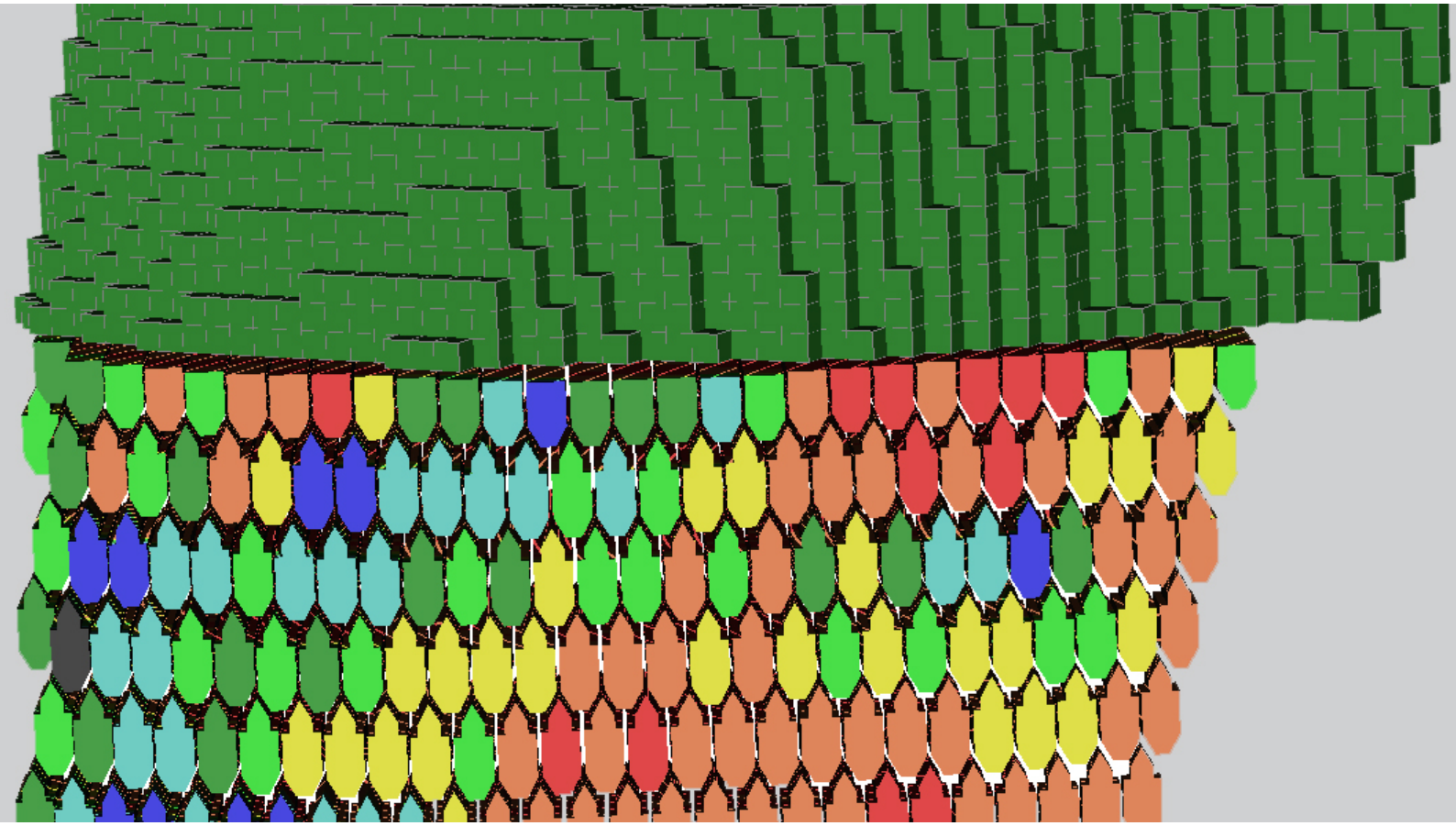
DASSAULT SYSTEMES

GEOVIA

GEOVIA GEMS™

PCSLC MODULE DATASHEET

A Comprehensive Tool for Sub-level Caving

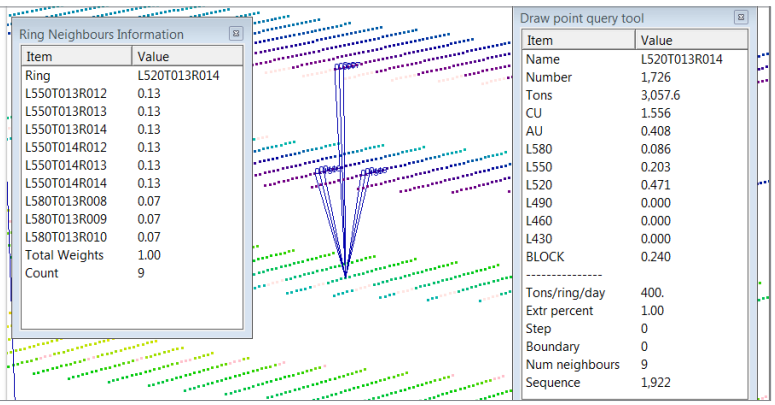


INTEGRATED MODEL SET UP AND PRODUCTION SCHEDULING

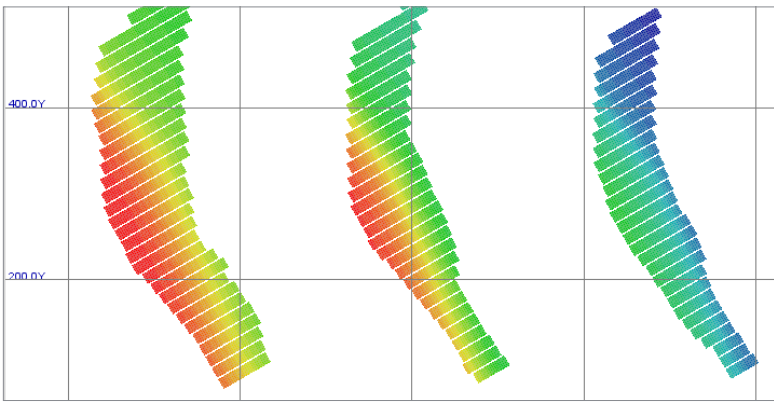
The GEOVIA GEMS™ PCSLC module is a tool developed specifically to meet the challenges of estimating sub-level caving projects. Using PCSLC, you can take a project from the block modeling stage through generating tunnels and rings along tunnels. You can also estimate reserves; determine variable extraction percentages for each ring; and create, analyze and report on production schedules.

Building on the success of the world's leading block caving technology – GEOVIA PCBC™, PCSLC offers a powerful set of capabilities for building sub-level caving production scheduling models, including:

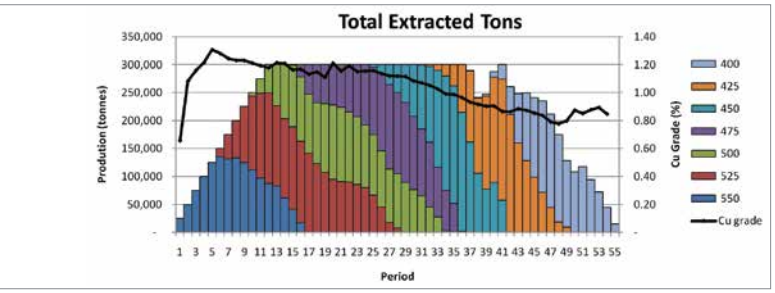
- Project setup.
- Ability to assign grades to each ring from block model or other external source.
- Generation of tunnels, including desired spacing and trimming to the orebody outline.
- Production scheduling to include dilution modeling.
- Equipment scheduling to constrain schedule production limits.
- Sequence generation in preparation for scheduling.
- Generation of rings to required shapes.
- Addition of dilution sources via block rings or external dilution source and assignment of neighbours for flow simulation.



Ring recovery plots.



Ring recovery plots.



Production schedule.

CALIBRATION AND PAST PROJECT EXPERIENCE

PCSLC has been successfully calibrated against REBOP™ (from Itasca) for two separate projects and replicated ring recoveries published for Ridgeway Mine. PCSLC has been implemented on projects for De Beers, Petra Diamonds, Newcrest, and SRK. Several other projects have also been studied using PCSLC.

FEATURES

- Streamlined setup of tunnels and rings for rapid start-up.
- Capacity to handle large projects with a maximum of 100,000 rings.
- Dilution simulation.
- Detailed scheduling constraints for advanced sub-level caving projects.
- Reporting of primary, secondary, tertiary and subsequent ring recovery efficiencies.
- Integration with GEMS and PCBC.
- Specialized display options such as the offset display below.

BENEFITS

- Rapid ramp-up for conceptual studies.
- Reduced dependency on spreadsheets and non-integrated applications.
- Superior run-time performance on full-sized projects.

RELATED SUB-LEVEL CAVE MODULES TO PCSLC

Draw Management System (DMS)

Draw control is a critical element of the overall cave management of a sub-level cave operation, and PCSLC's DMS is specifically designed to automate and optimize this process. Developed for daily operation, with strong graphical display and analysis tools, DMS will improve the productivity of cave management technicians and help manage the sub-level cave operation in the short term.

- Powerful management reports for effective monitoring of dynamic situations.
- Shift level simulation of ring drilling, blasting and loading activities.
- Shift of daily generation of a mining draw order from active rings.
- Track face leads and lags, and ring status.

Advanced Planning Tools for PCSLC

The Advanced Planning Tools for PCSLC allows for more precise planning of ring activities and face shapes, which is needed as a sub-level cave project matures or becomes an operating mine.

- Stepping function for any production schedule that are compatible with the scheduling periods.
- Shorter, longer or variable time periods can be set.
- Strong view/selection tools of the sequence and face shapes.
- Multiple tools to edit face shapes.
- Import and export the scenario bucket workspace to and from Microsoft® Excel® for extended viewing and editing capability.
- Undermining warning that highlights rings which have the potential to undermine other rings following user editing of the sequence.

For more information email GEOVIA.GEMS@3ds.com or visit www.3ds.com/GEOVIA/GEMS

Our 3DEXPERIENCE® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

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