MAPTEK™ Vulcan™

VULCAN SCHEDULING MODULES

Vulcan Scheduling solutions provide tools for open pit and underground mine scheduling.

CHRONOS BASE SCHEDULER & RESOURCE SCHEDULING

Interactive spreadsheet environment to store, schedule, manipulate and report mine production sequences for short to long term plans.

> Visualisation of results from scheduling decisions through virtual mining and animations.

> Key operations and business model outputs dynamically calculated within the schedule workbook.

> Scheduling carried out with immediate knowledge of the downstream implications of each decision.

> Scheduling workbooks are easily customised to fit any scenario.

> Ability to link to Enterprise Management Systems.

> Interactively schedule reserve blocks for each period.

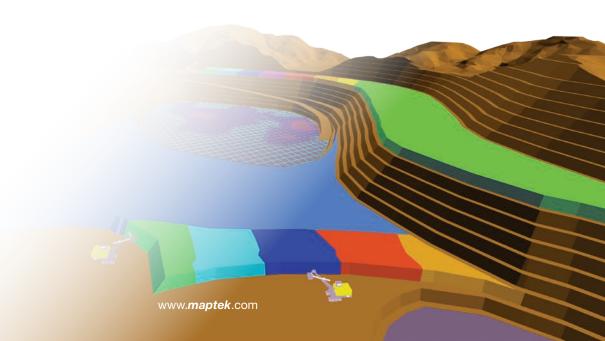> Tools for interactive design and scheduling, ability to modify the blocks with automatic update of the schedule.

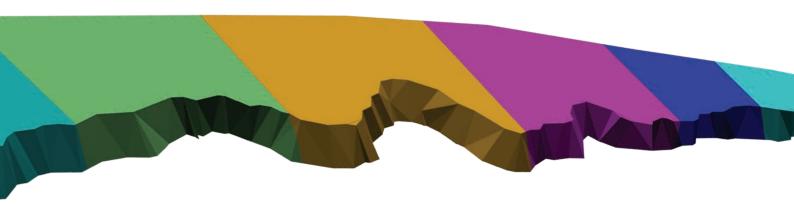HELPS THE SCHEDULING ENGINEER IDENTIFY AREAS TO INCREASE EFFICIENCY.

CHRONOS RESERVER

An excel spreadsheet interface to Vulcan allows instant volume and reserve calculations.

> Offers an Excel spreadsheet interface to Vulcan allowing instant reserve calculations using grid models and block models, as well as simple volume calculations.

> Any information entered into the spreadsheet from block model reserving or by mathematical functions can be instantly queried in Vulcan by simply clicking on a polygon or triangulation.

> Attributes of design objects and triangulations can be changed by any field in the spreadsheet. For example, it is possible to colour all ore blocks based on grade and to hide all waste blocks.

INSTANT QUERY OPTIONS GIVE FLEXIBILITY FOR PLANNING.

SHORT TERM PLANNER

The Vulcan Short Term Planner module is a collection of scheduling tools designed for open pit mines.

> Allows engineers to base target and extraction points on information directly from a Vulcan block model, eliminating the need to prepare and pre-process scheduling regions.

> Bundled with Chronos Interactive Design and Schedule and Interactive Polygonal Reserves tools for operations with interactive scheduling needs.

> Configurable to each operation's specific requirements.

> The sequence reporting tool interacts directly with block models to meet product requirements.

> Allows for predefined cutoffs to be used, while blocks are scheduled interactively across solids using linear and radial accumulation techniques.

ALLOWS INTERACTIVE DESIGN AND SCHEDULING.

CHRONOS OPTIMISATION

The Chronos Optimisation configuration works on a Chronos Base Scheduler, allowing creation of optimised schedules.

> Creation of optimised schedules using the CPLEX optimisation engine.

> Operational restrictions are easily assigned either interactively or with a graphical wizard for overall definition of mining precedences.

> Economic and metallurgical restrictions can also be used for optimisation, giving every scheduling period its own targets and constraints defined in a single objective function.

> Dynamic display of results, providing information that combines mine design, geological model and schedule.

> Meets short term production requirements.

> Visualisation and scenario analysis facilitates greater understanding of the mining operation, helping identify areas of improvement.

> Schedule all types of underground and open pit deposits in a user-friendly interface.

CHRONOS PROMOTES EFFICIENCY AND INCREASES LIFETIME PROFITABILITY.