

## STOPE OPTIMISER

The Vulcan Stope Optimiser saves time and increases accuracy in underground stope design. Individual designs take into account stope geometry along with geological and geotechnical restraints.

### HOW DOES IT WORK?

#### INPUT

Stope Optimiser requires only a block model and either grade, value or density variables. Simply enter your specifications.

Options include:

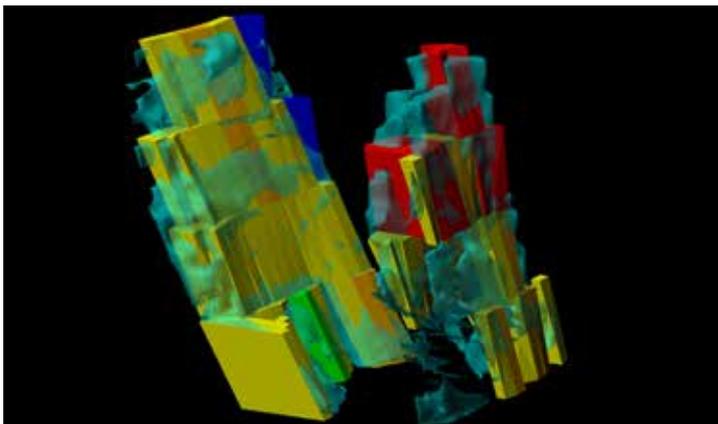
- > Stope surface control
- > Additional model variables
- > Exclusion zones
- > Dip and dip direction
- > Orientation of stopes (edited interactively with the model)
- > Optimisation extents (edited interactively with the model)
- > Create or specify irregular frameworks
- > Variable cutoffs based on position or stope size
- > Head grade

#### OUTPUT

Once data is entered, the Stope Optimiser automatically produces stope shapes to specification, in a repeatable and optimal way. Splitting, smoothing and merging options allow users to fine tune desired stope shapes.

The following reports can be generated:

- > Valid stope triangulations
- > Design strings with side walls and base plate
- > Verification triangulations
- > Stope reports



### YOUR QUESTIONS ANSWERED

#### Where does the data come from?

Data comes from a Vulcan block model. Block models are easy to create, taking just minutes to set up.

#### How much setup work is required?

Setup takes only a few minutes. Once you set the parameters in a series of panels, Stope Optimiser does the rest.

#### How does Stope Optimiser account for waste stopes?

Exclusion variables established in the block model indicate whether to include waste stopes.

#### Can I perform sub-level stoping?

Yes. The initial stope orientation, size, and sub-levels are determined prior to starting.

#### Can I use any orientation of stope?

Yes. It is possible to apply any orientation of stope, from vertical to shallow dipping horizontal stopes.

#### Can I perform cutoff by grade or value?

Yes. You can also use cutoff factors of theoretical mining, recovery and processing costs.

### TIME SAVING WITH VULCAN STOPE OPTIMISER

#### Manual Stope Design

800 stopes @ 4 minutes per stope  
= 3200 minutes or 53.3 hours

#### Vulcan Stope Optimiser

800 stopes processed in 2684 seconds  
= 44.73 minutes

A time saving of 3155.27 minutes or 52 hours!