

Geotechnical Toolbox

Vulcan Geotechnical Toolbox allows users to develop a comprehensive structural database with tools to display, calculate and analyse geotechnical information.

How does it work?

Input

Users can build a structural database with information from a wide variety of sources.

Drillhole data can be automatically imported from a drillhole database. Inbuilt options allow for other geotechnical or mapping information to be easily imported.

Vulcan also allows users to map features 'on the fly' using digitised data, such as a scanned hand drawn map, digital photo or high quality laser scan data. All information entered 'on the fly' updates the database.

Once the database is complete, interactive interpretation can be performed in 3D:

- Extrapolate fault planes
- Create Stereonets and Rose Diagrams
- Structural analysis
 - Friction Cone
 - Toppling Windows
 - Daylight Windows
 - Wedge Failures
- Identify trends
- Assess rock competency
- Stratigraphic analysis
- View core sample images with data

Output

Interpretation of the structural database allows:

- Block modelling for geotechnical predictions
- Comprehensive analysis of structures for mine design
- Analysis of stability, rock dynamics, constraints per rock type and rock mechanics
- Change of mine design parameters based on results
- Easy analysis of different operational or design scenarios
- Incorporation of geotechnical information into reserve grade estimations

Your questions answered

What applications can the Geotechnical Toolbox be used for?

The Geotechnical Toolbox can be used for any application for which you have geotechnical data.

Can the geotechnical tools be used in underground operations?

Yes. The Geotechnical Toolbox is designed for applications across open pit and underground operations.

What do I need to set up a structural database?

All you need is some applicable geotechnical information with GPS coordinates.

Can I switch between views to see the data in detail?

The powerful 3D engine in Vulcan makes it quick and easy to switch. View the data in detail or zoom out to see the big picture.

Can I label structural data as I view it in the 3D environment?

Yes. The Annotate function allows you to label structural data while you are interpreting the information.

Benefits

1. Visualise geotechnical information in a true 3D environment.
2. Comprehensive geotechnical database that can be applied to future tasks.
3. Map features 'on the fly' with powerful mapping tools.

More questions? Contact us:

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