Channel Sampling

Vulcan Channel Sampling Module the creation and manipulation of underground channel samples for geotechnical analysis.

What is Channel Sampling?

Vulcan Channel Sampling uses a combination of options to create and manipulate underground channel samples.

Because channels are sampled at different angles from the vein, it is difficult to efficiently establish the actual minimum width based on the channel orientation, vein azimuth and dip.

How does it work?

Channel Sampling uses a compositing method to obtain the actual channel length that represents a minimum mining width.

The minimum mining width in the real vein thickness direction is projected onto the channel plane to obtain a length in the channel direction.

This length is then used to create an ore composite, including internal waste as necessary, using standard Vulcan compositing tools. The procedure is repeated for each channel.

An automated lava script is an efficient way to sample thousands of channels. The script performs all of the geometric calculations between the vein triangulation and each of the channels. The script also creates the actual ore composites.

Input
- Channel samples
- Geotechnical data

Output
- Defined mineable vein boundaries
- Start and end points of channel composites
- Framework to build a resource model
- Database information can be incorporated into the reserve grade estimation

Benefits
1. Ideal for underground mines requiring a single administration of the samples for channels.
2. Can be achieved manually or by interactive graphics.

Your questions answered

How much input can I have to the data?

Users can create and edit simple locations of channel samples, and define cutoff limits.

Does the software determine the starting side of the channel?

A simple database calculation script is used to classify channels according to the orientation in which they were created, thus the starting side of the channel is known.

For channels extending from the footwall to the hanging wall, the start coordinate represents the footwall and vice versa. The channel points are also controlled by the vein model from the drilling sections.

This can also be done while digitising the channel.

How do I create a resource model?

After pre-processing using Channel Sampling is complete, the vein model is triangulated using both the section polygons and the start and end points of the channel composites. From this, a resource model is created.

What if I don't have enough survey information for the channel?

Samples can be rotated around the orientation and inclination, allowing the user to easily locate channels without enough survey information.

Can Channel Sampling be used for above ground operations?

Yes. Channel Sampling is most commonly applied to underground operations; it can also be applied to surface operations.

More questions? Contact us:

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