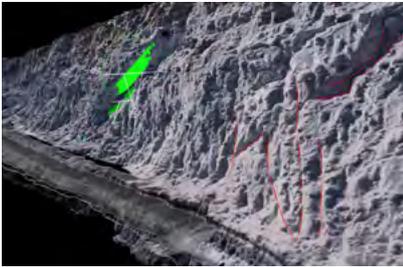# MAPTEK™ I-Site™ Studio

Geotechnical Module

Powerful software featuring intuitive workflow

Geotechnical tools

The Maptek™ I-Site™ Studio Geotechnical Module features powerful analysis tools. Combined with standard I-Site Studio functionality, they deliver a comprehensive geotechnical solution.
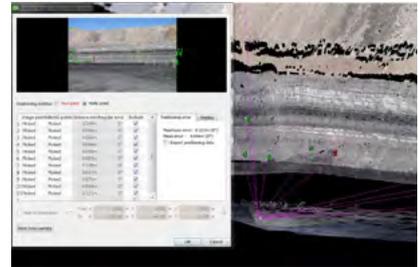
Geological mapping

1 Use **Smart Line** tools to trace geological boundaries onto high resolution imagery direct from the laser scanner.
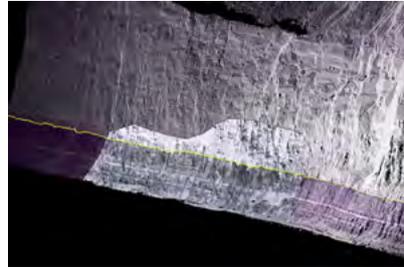
2 Use **Intensity Map** combined with imagery to highlight key alteration zones.

3 Render high resolution SLR images over 3D scan data for increased accuracy.

Geotechnical features at a glance

Kinematic Analysis

Create great circles (planes), analyse potential failures, add daylight envelopes and friction cones.

Stereonet

Plot a stereonet of all discontinuities and other structurally defined objects.

Discontinuity

Select an area of interest to automatically identify all other areas in the view that meet the selection criteria. Discontinuities can be merged to avoid duplicate data.

Rose Diagram

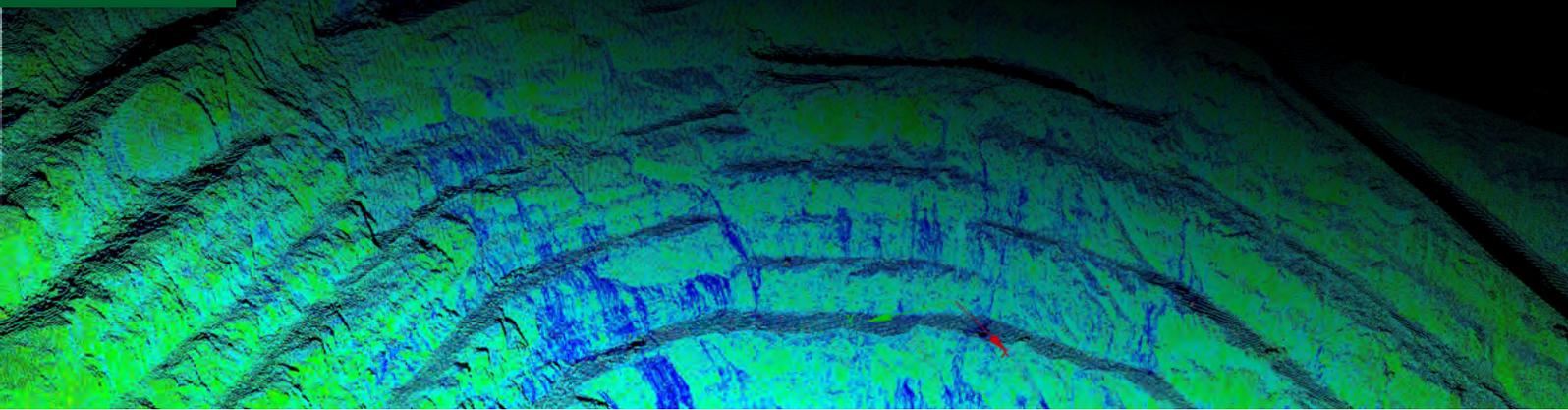Plot the frequency versus the direction of the data to identify directional trends.

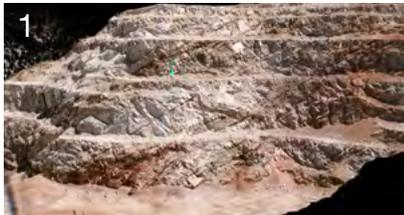### Dip and Strike

Display the dip and strike of a feature.

Analyse Surface Change

Detect changes in surfaces such as walls, batters, development drives and faces on the surface and underground. Overlapping surfaces scanned at different times are used to display movement and rate of movement.
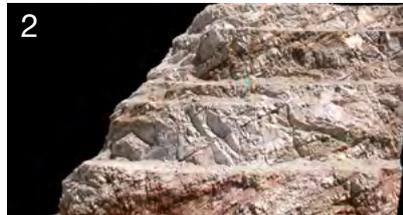
Specialised geotechnical tools and the power of I-Site Studio software - customisable toolbars, powerful database, intuitive filtering, flexible registration and extensive analysis tools.

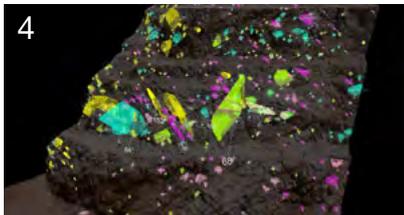## Geotechnical analysis with I-Site

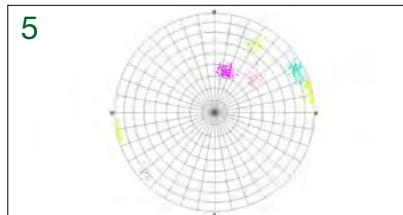
1

Scan the area using a laser scanner.

2

Prepare the area of concern for analysis by using applicable filters to remove excess data and rogue points.
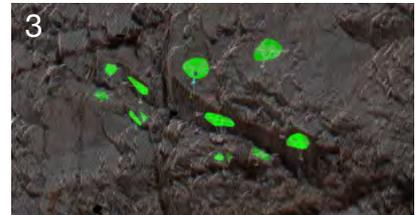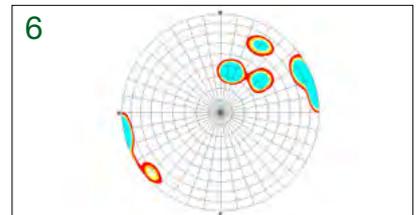

3

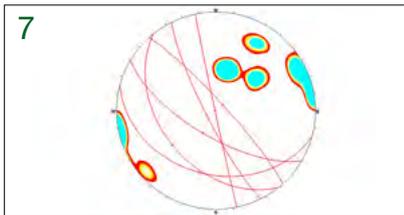Use the **Query** tool to extract dip and dip direction with user defined parameters.

4

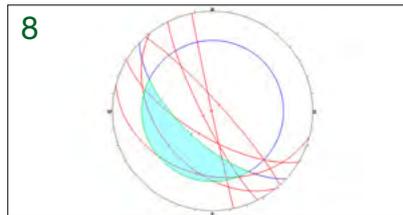Automatically extract discontinuities using the **Extract Discontinuities** tool.

5

Create a **Stereonet** plot of discontinuities.
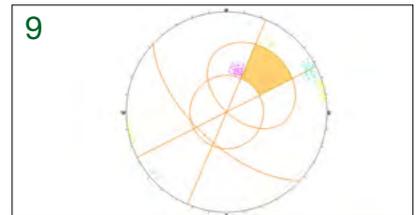

6

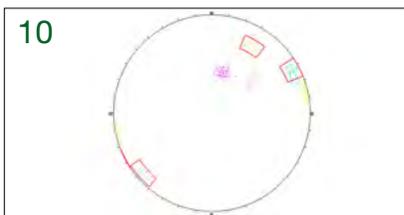Contour the poles to visualise trends.

7

Add Planes to poles to begin Kinematic Analysis to identify wedge failures.
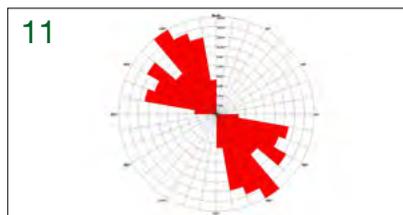

8

Use the **Kinematic Analysis** tool to analyse potential wedge failure.

9

Use the **Kinematic Analysis** tool to analyse potential planar failure.

10

Create **Set Windows** to highlight specific areas.

11
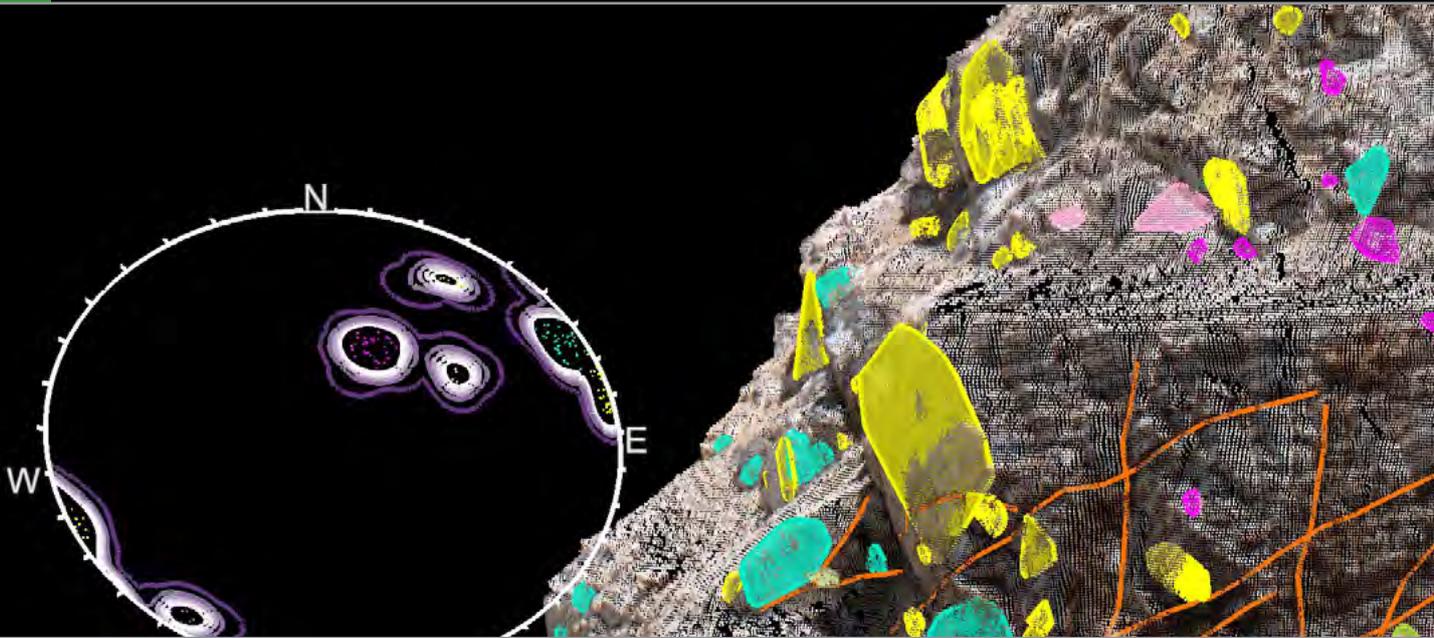
Create **Rose Diagrams** for blast engineers.

12

Export geotechnical data, along with ireg imagery, directly into Vulcan from I-Site Studio.

Industry Leading Global Solutions

Maptek is the leading global provider of innovative software, hardware and services for the mining industry. More than 1800 customers in 75 countries rely on Maptek.

Our solutions help reduce operating costs and improve performance, productivity and profitability. Maptek provides expert consulting, training and support services to ensure you get the most from your investment in our products.

MAPTEK