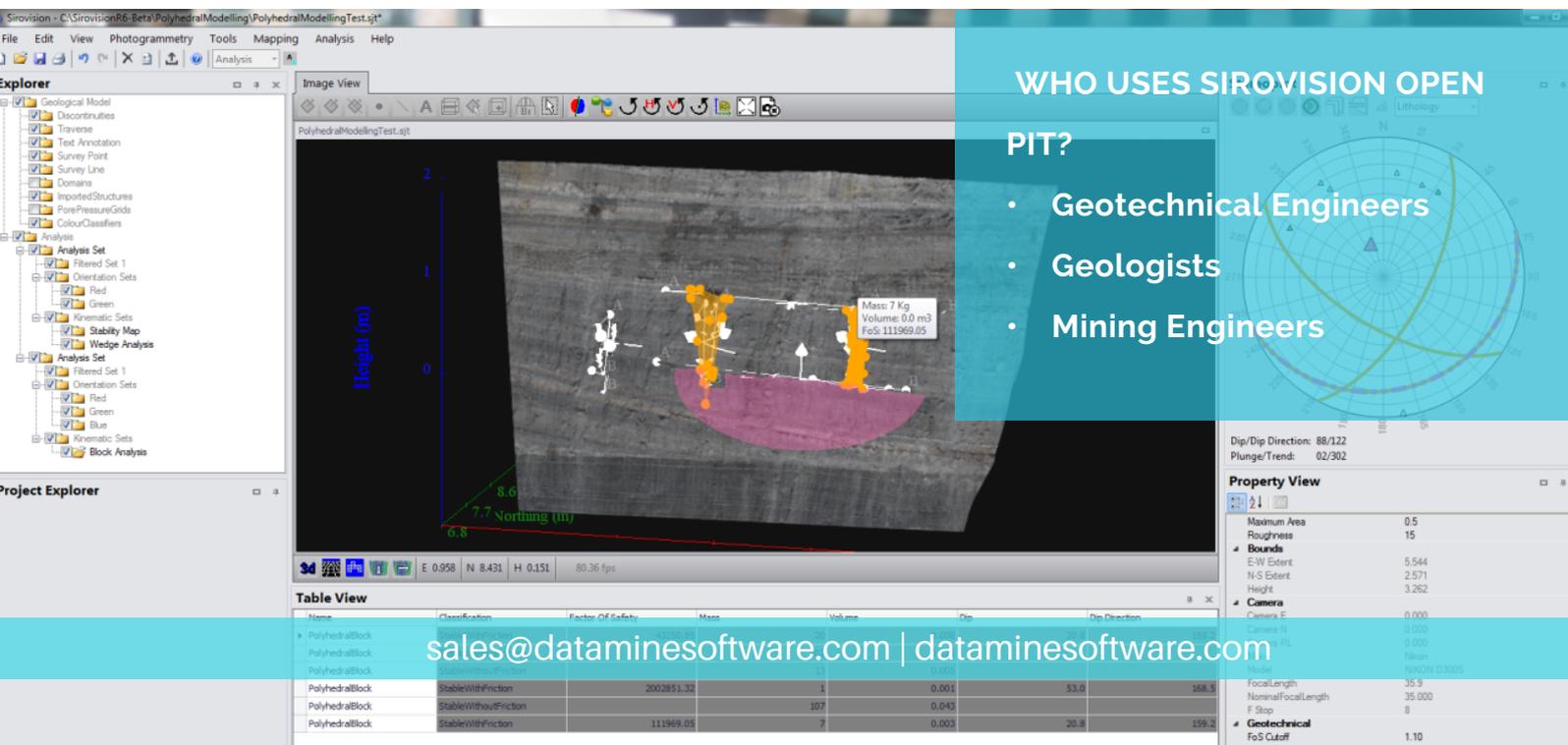


SIROVISION OPEN PIT

A remote sensing
System for
Rock mass and
Structural
Analysis

OVERVIEW

Sirovision Open Pit is a remote sensing system for mapping geology and interpreting geotechnical characteristics of exposed mining faces. The system utilizes off-the-shelf digital SLR cameras to capture stereo photographs of the rock face and uses the latest image processing technology to generate accurate 3D models. These 3D models are digitally analysed using computational geometry to extract unbiased and accurate geological and geotechnical data.



WHO USES SIROVISION OPEN PIT?

- Geotechnical Engineers
- Geologists
- Mining Engineers

Table View

Name	Classification	Factor Of Safety	Mass	Volume	Dip	Dip Direction
PolyhedralBlock						
PolyhedralBlock						
PolyhedralBlock	StableWithFriction		2002851.32	1	0.001	53.0
PolyhedralBlock	StableWithoutFriction		107	0.043		
PolyhedralBlock	StableWithFriction		111969.05	7	0.003	20.8

Property View

Maximum Area	0.5
Roughness	15
Bounds	
E-W Extent	5.544
N-S Extent	2.571
Height	3.262
Camera	
Camera.E	0.000
Camera.N	0.000
Camera.P.L	0.000
Camera.P.R	0.000
Camera.P.T	0.000
Camera.P.B	0.000
Camera.P.F	0.000
Camera.P.S	0.000
Camera.P.A	0.000
Camera.P.V	0.000
Camera.P.H	0.000
Camera.P.L	0.000
Camera.P.R	0.000
Camera.P.T	0.000
Camera.P.B	0.000
Camera.P.F	0.000
Camera.P.S	0.000
Camera.P.A	0.000
Camera.P.V	0.000
FocalLength	35.3
NormalFocalLength	35.000
F Stop	8
Geotechnical	
FoS Cutoff	1.10

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KEY BENEFITS

- **The whole pit can be photographed** and generated in to highly accurate 3D models by technicians
- **Flexible field methods** require only 3 control points to georeference an entire rock wall
- **Structural features** can be mapped with instant geotechnical results
- **Automated detection** of all unstable features in the pit including wedges, blocks and toppling hazards based on rock density, pore pressure, cohesion and pore pressure data

FEATURE HIGHLIGHTS

- **Easy deployment** utilizing standard off-the shelf digital SLR cameras and lenses
- **Hardware setup costs** can be as low as \$2,000
- **Flexible level of detail** capture using different focal length lenses

BOOK A DEMO

To book a free demo of Datamine's Sirovision Open Pit, contact your local Datamine office.

WHY USE SIROVISION?

Spatial Accuracy: Typically produces accuracy of 3cm to 5cm every 100 m distance to the rock face (1:3000 to 1:5000).

Mapping Accuracy: Better than +/- 0.5 ° for dip angle and dip direction over standard operating ranges of 3m to 1500m for open pit and 3m to 12m for underground.

Speed: Photographs can be taken easily and rapidly. Different focal length lenses provide great flexibility in level of detail.

Safety: Minimal "at face" time required to capture digital record of the rock mass. Photographs can be captured from up to 1500m away.

Ease of Use: Three days of training in field procedues, requiring only basic knowledge of how to use a digital camera.

Low Cost to Implement: Rapid payback time. As the open pit system uses off-the-shelf digital SLR cameras, hardware setup costs can be as low as \$2,000.

Joint set analysis suite:

- spherical projections
- rose plots
- statistical histograms
- customizable joint set analysis schemas
- kinematic set analysis of wedges and blocks
- automated mineral/ore body mapping

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