

# 3G Software & Measurement ShapeMetriX3D

Jeffrey R Keaton



Los Angeles

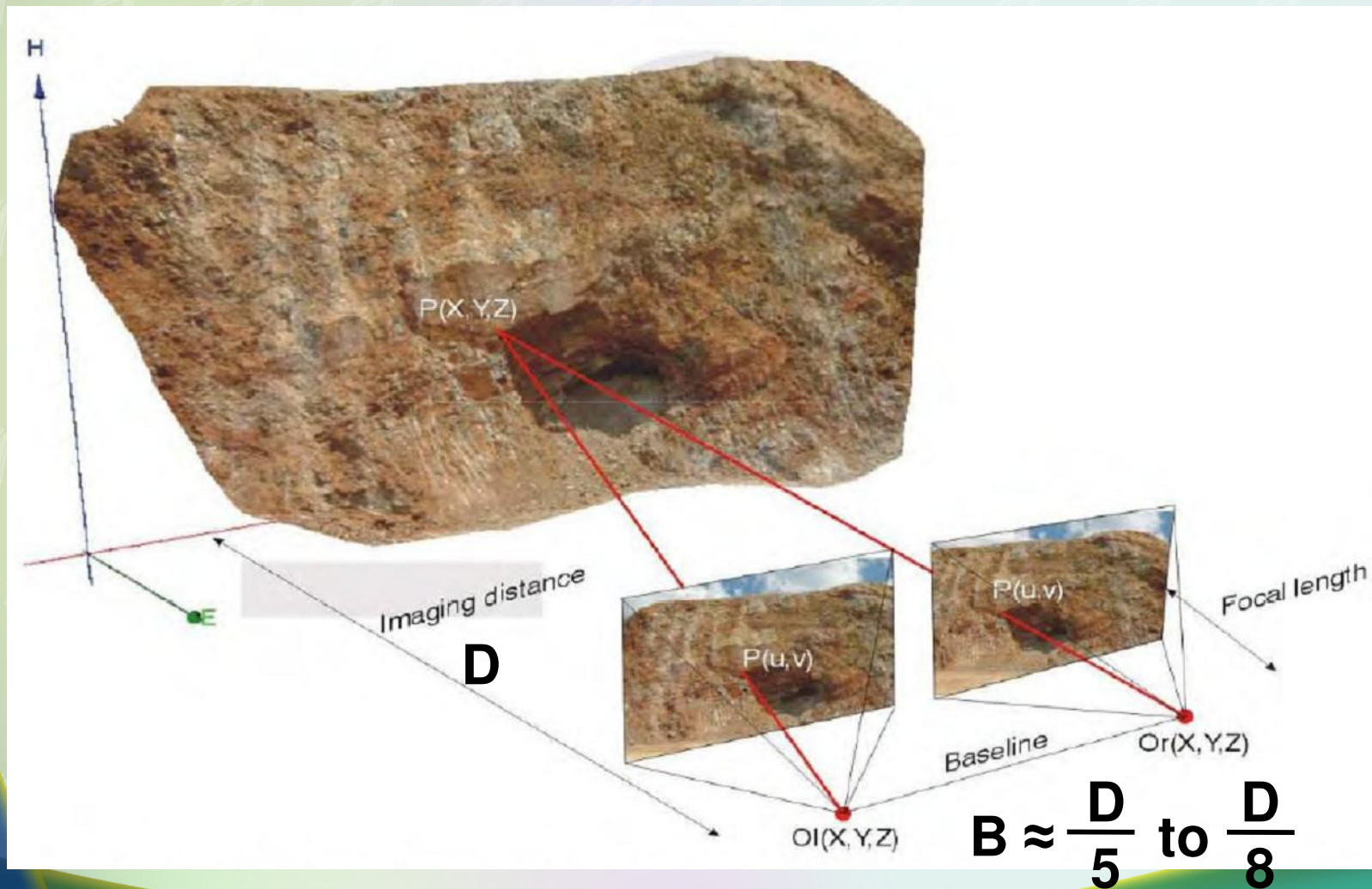
# Data Acquisition Systems

- Laser scanning
  - Optec
  - Leica Geosystems
  - Others (maybe many?)
- Terrestrial photogrammetry
  - Sirovision
  - Adam Technology
  - 3G Software & Measurement



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Fax: +43-316-464744-11  
[office@3gsm.at](mailto:office@3gsm.at)  
[www.3gsm.at](http://www.3gsm.at)

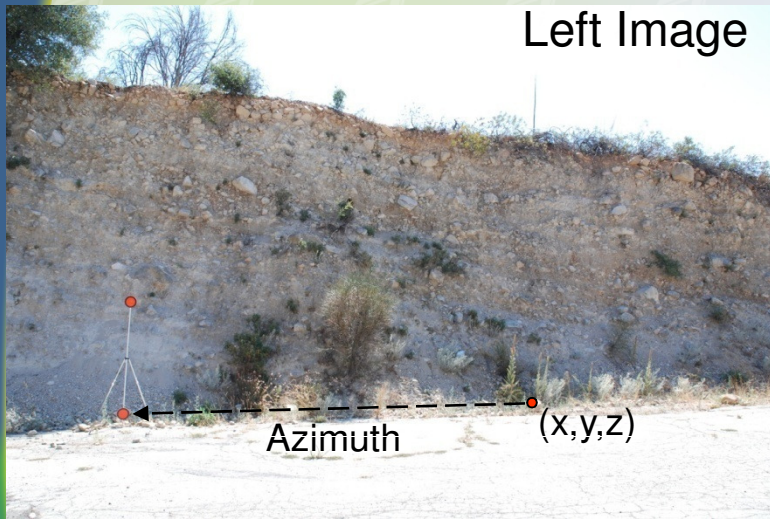
# Basic Parallax



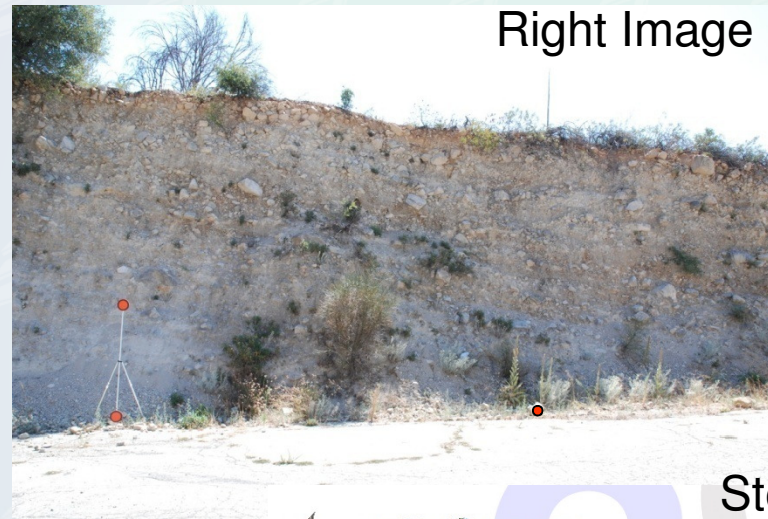


# Stereo Pair with Range Pole

Left Image



Right Image



Stereo Model



Range Pole

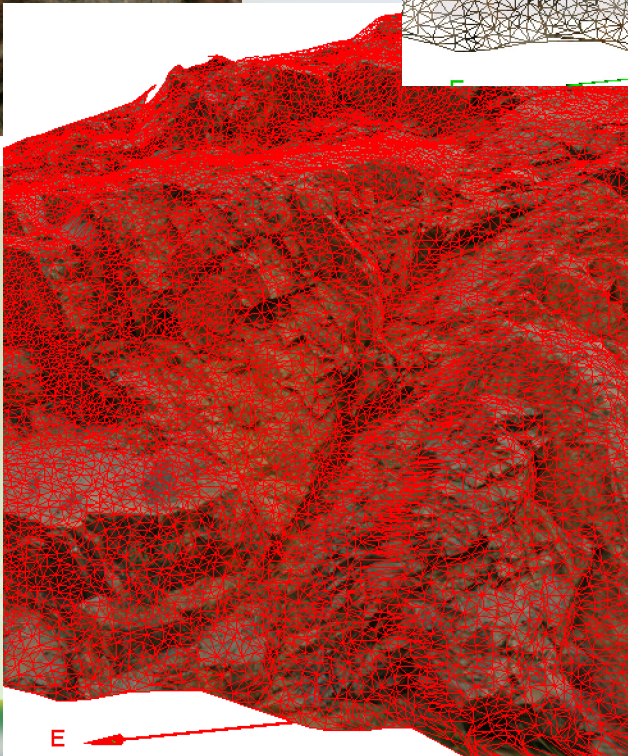
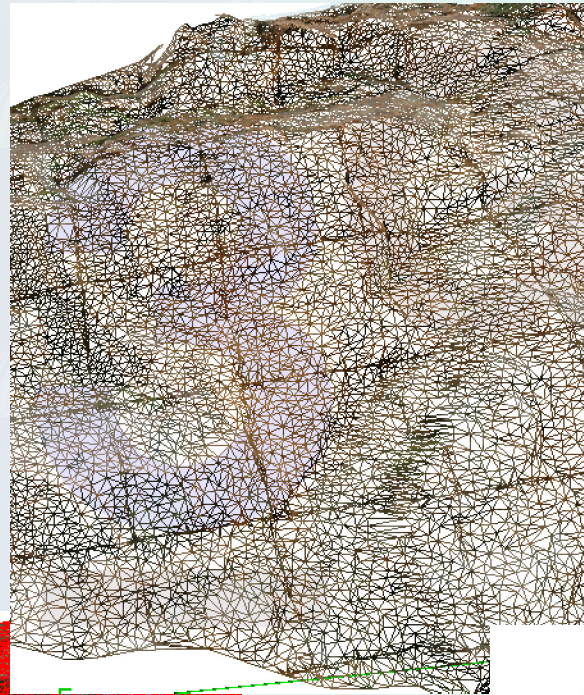


Bull's-eye Level

- Handheld digital camera
- Calibrated lens
- Range reference
- Vertical reference
- North reference
- Spatial reference

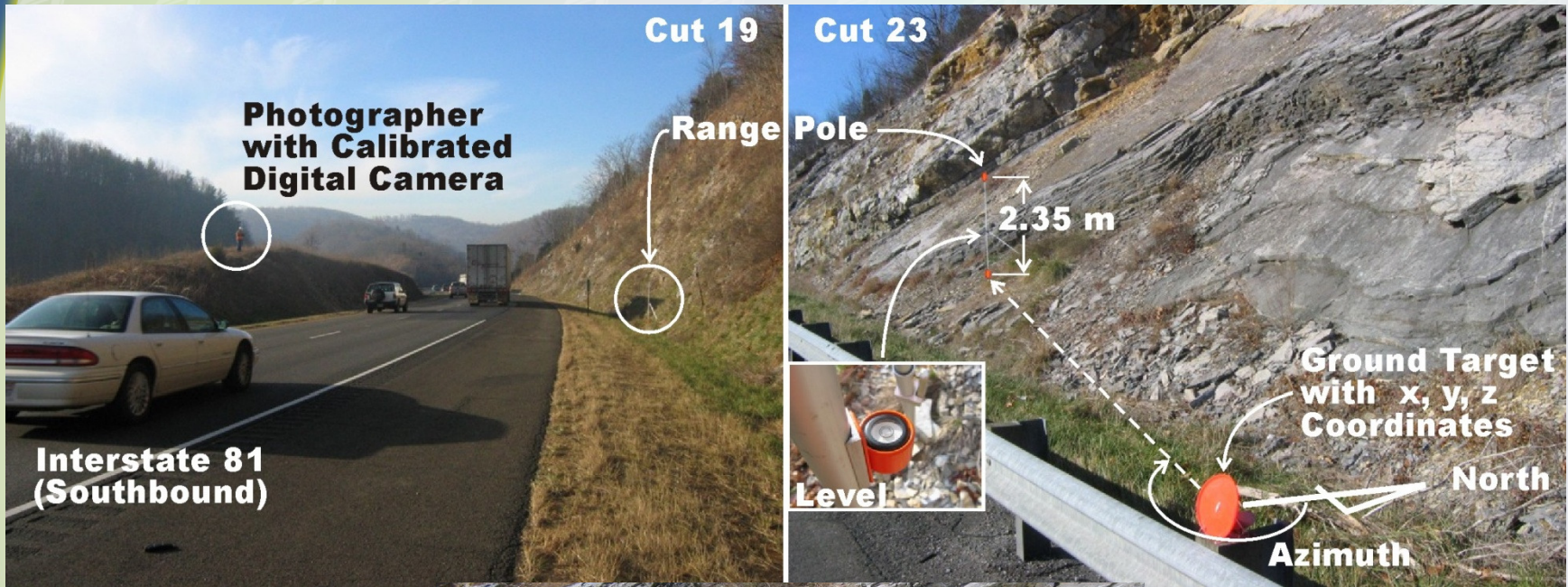








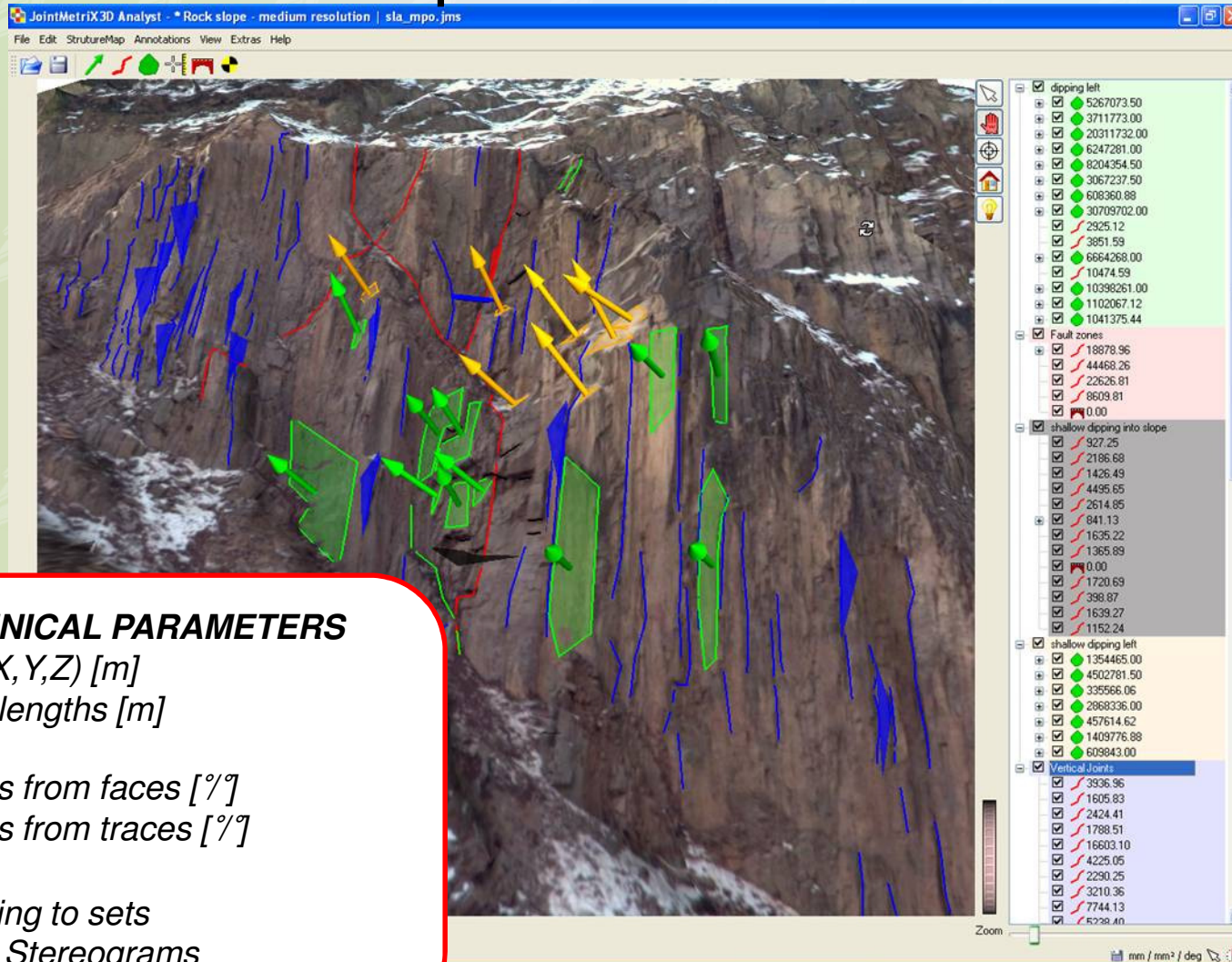
# Range Pole and Ground Target





# RESULTS

## 3D rock mass parameters



### GEOTECHNICAL PARAMETERS

Positions (X,Y,Z) [m]

Distances, lengths [m]

Areas [m<sup>2</sup>]

Orientations from faces [°]

Orientations from traces [°]

Bridges

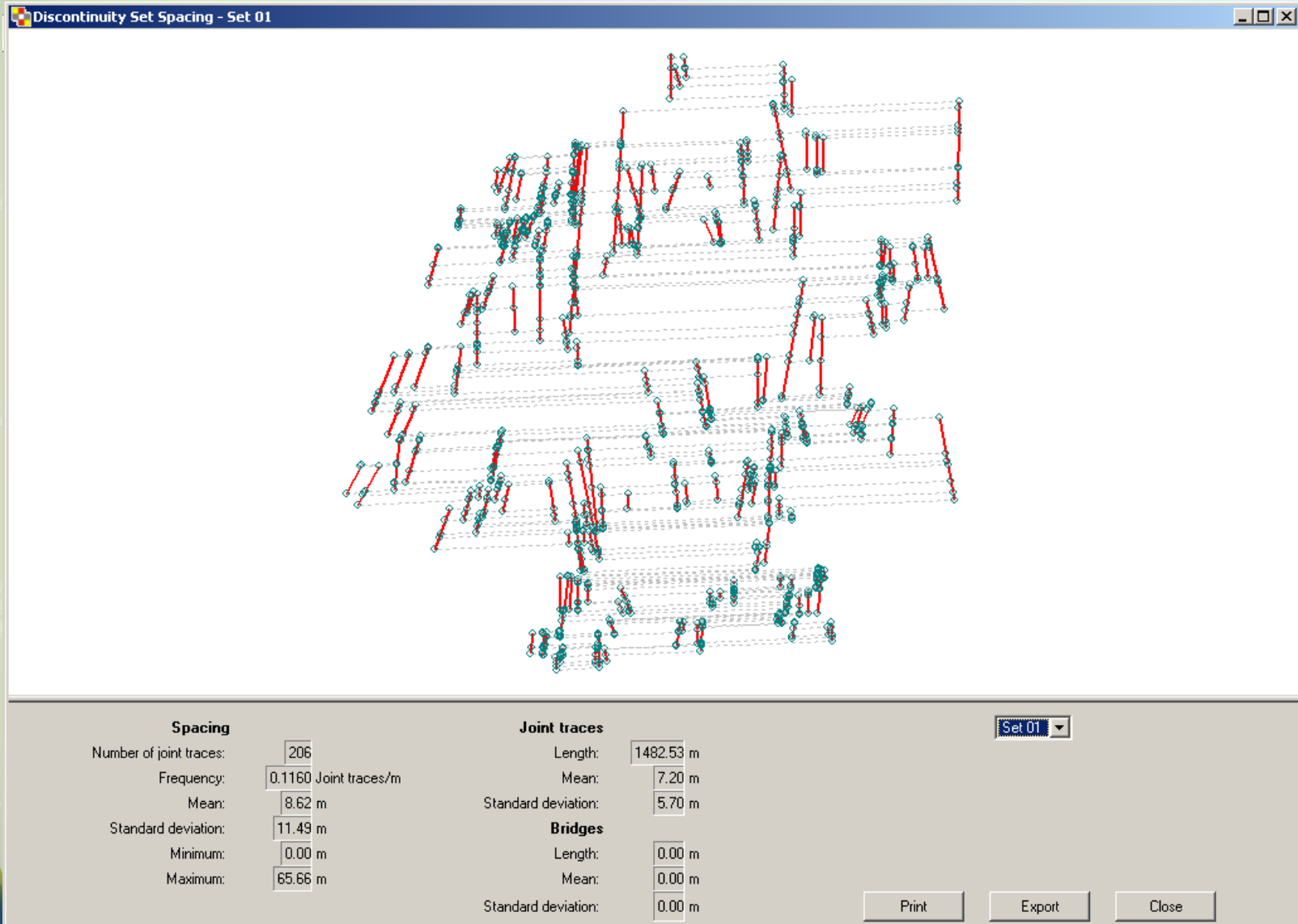
Free grouping to sets

→ Spacing, Stereograms

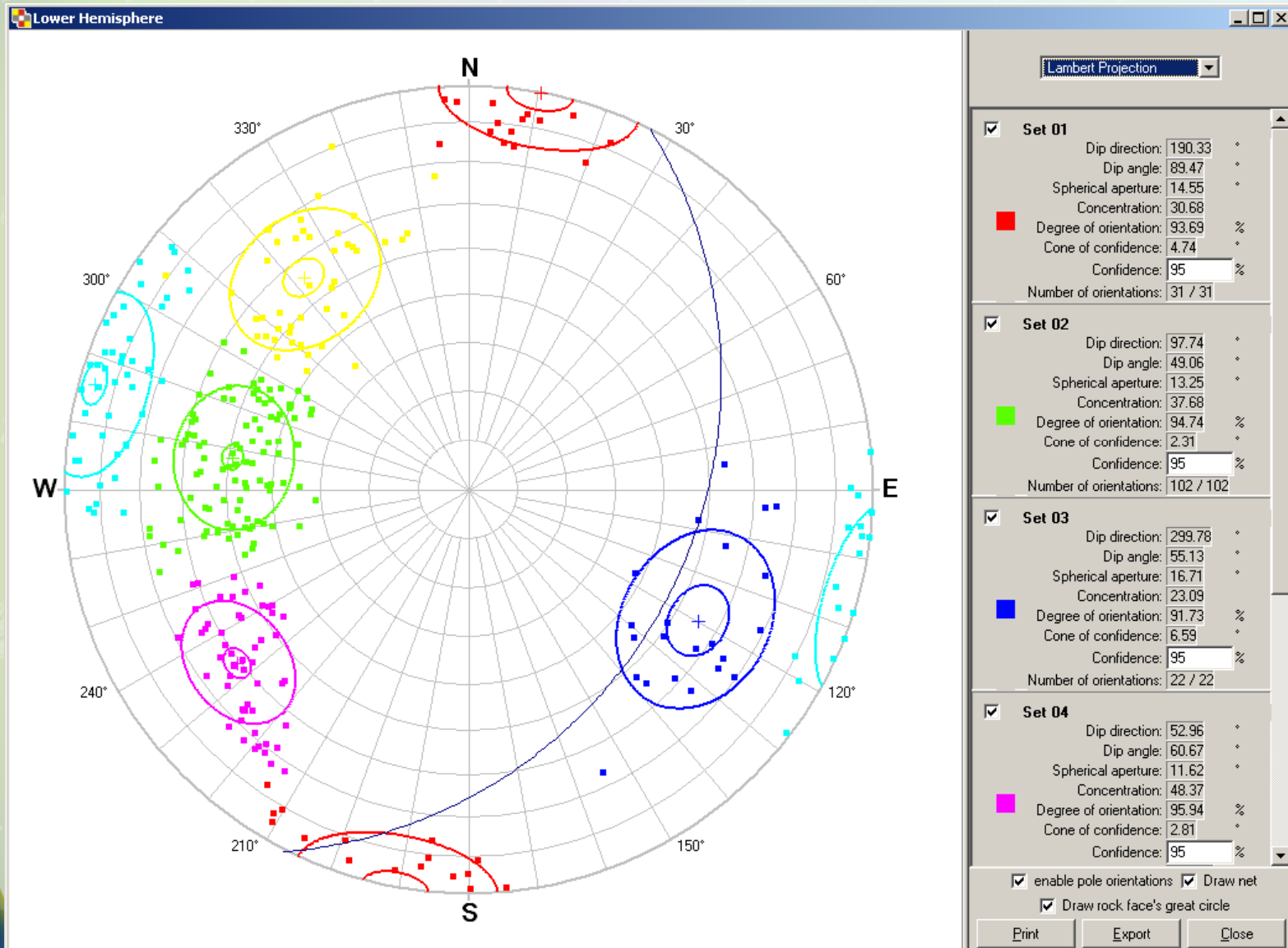
Export directly into CAD, MS Excel



# SPACING

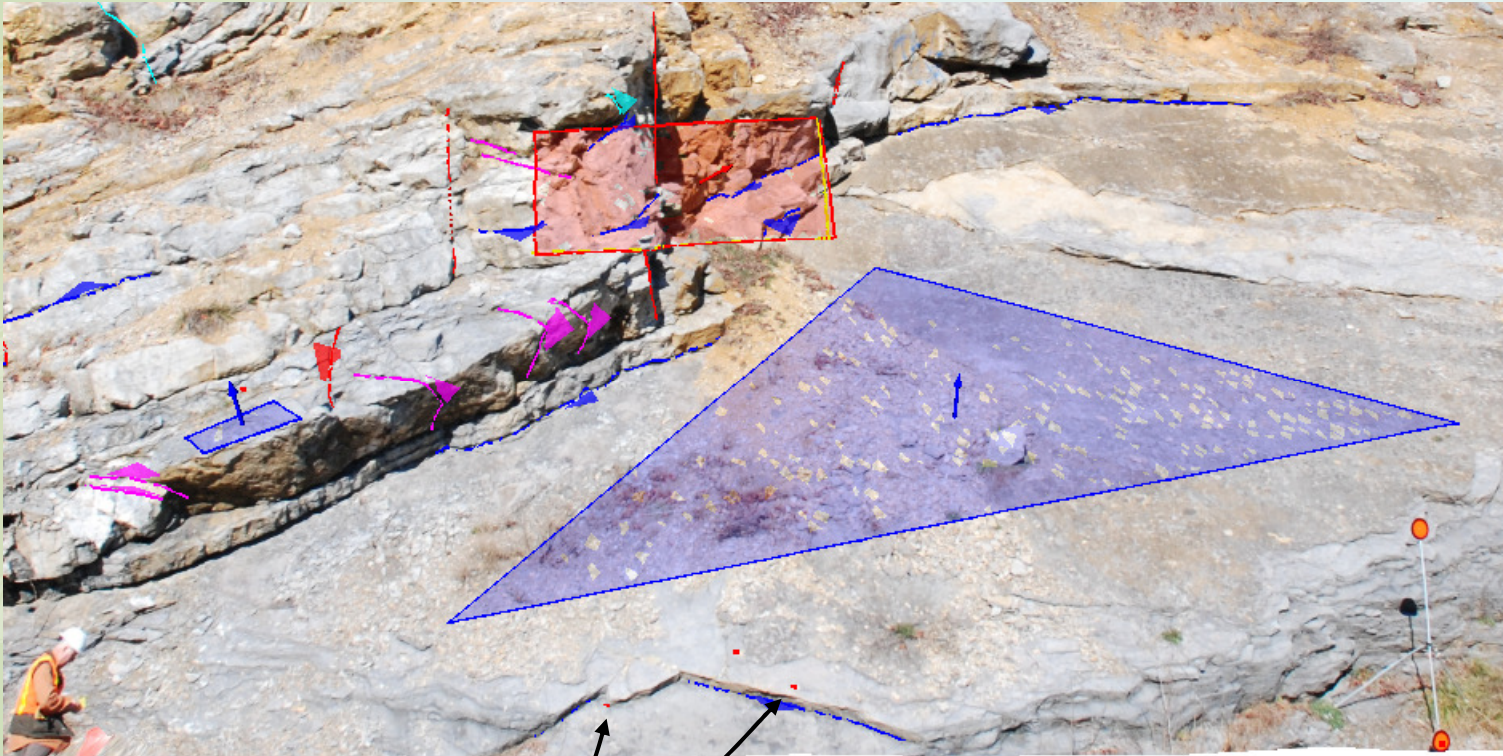


# STEREONET



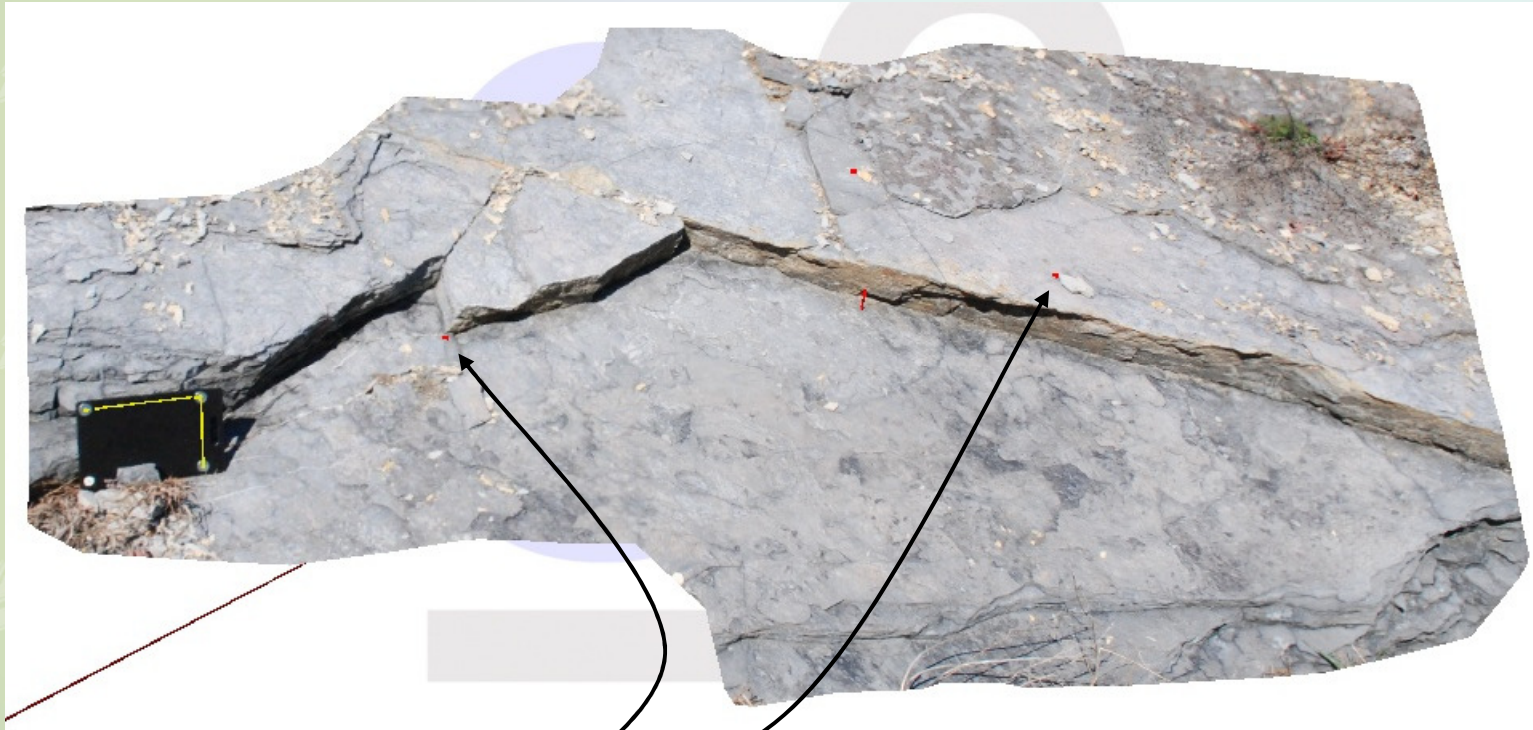


# Basic Model – Detailed Model



Red points

# Basic Model – Detailed Model



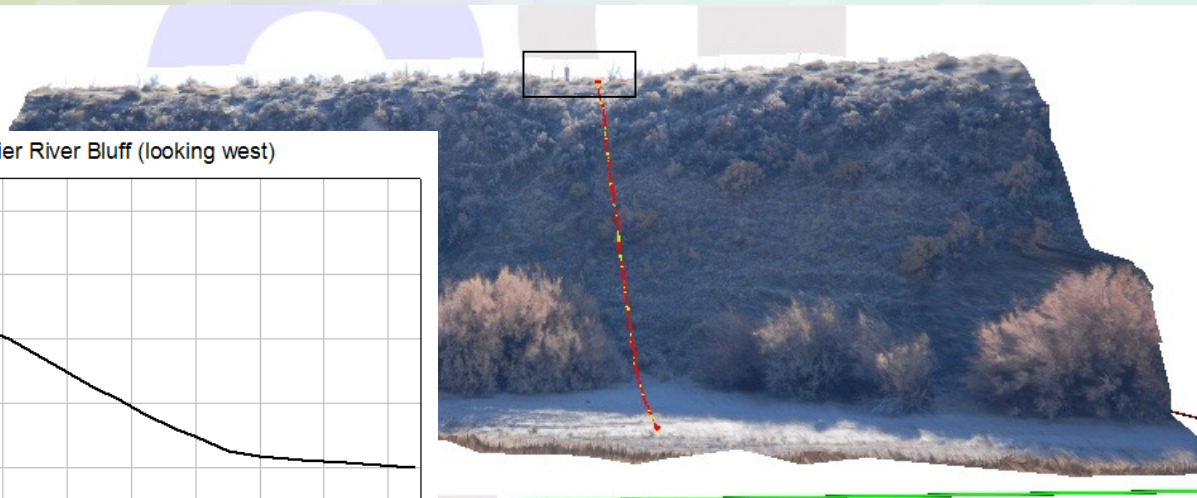
Red points



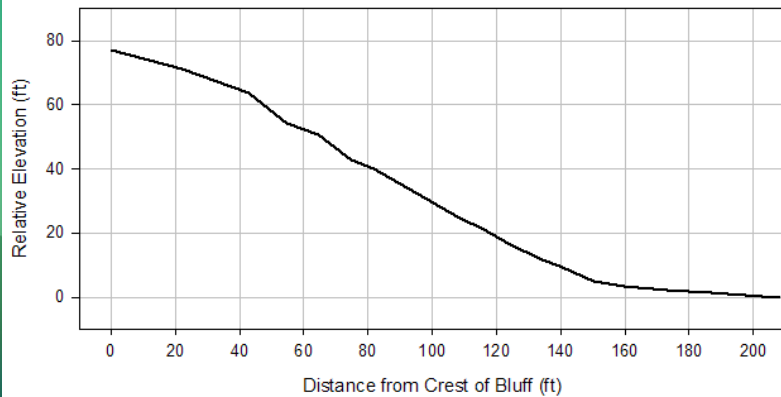
# Bedding Plane Roughness



# Slope Profile

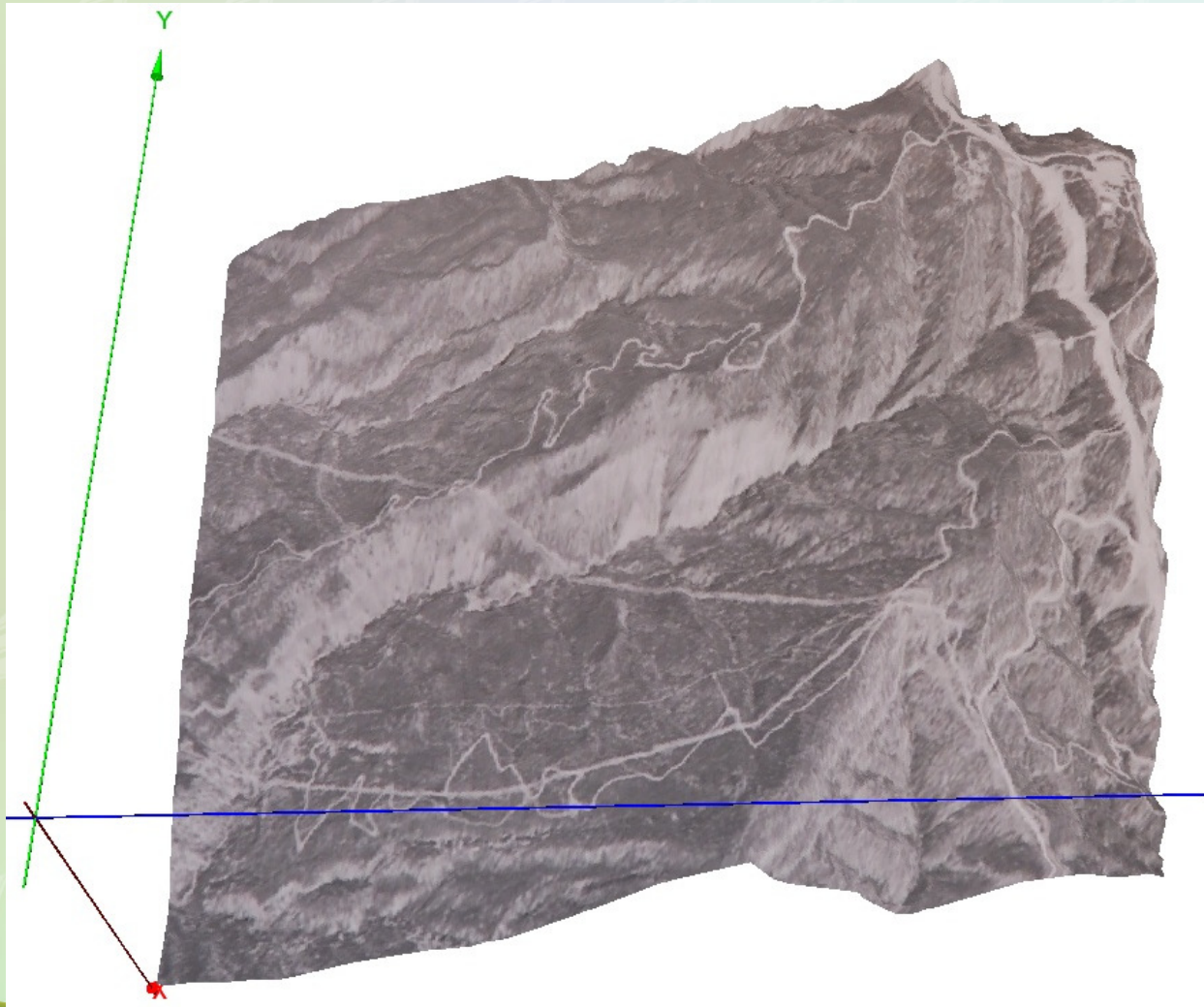


Profile of Sevier River Bluff (looking west)

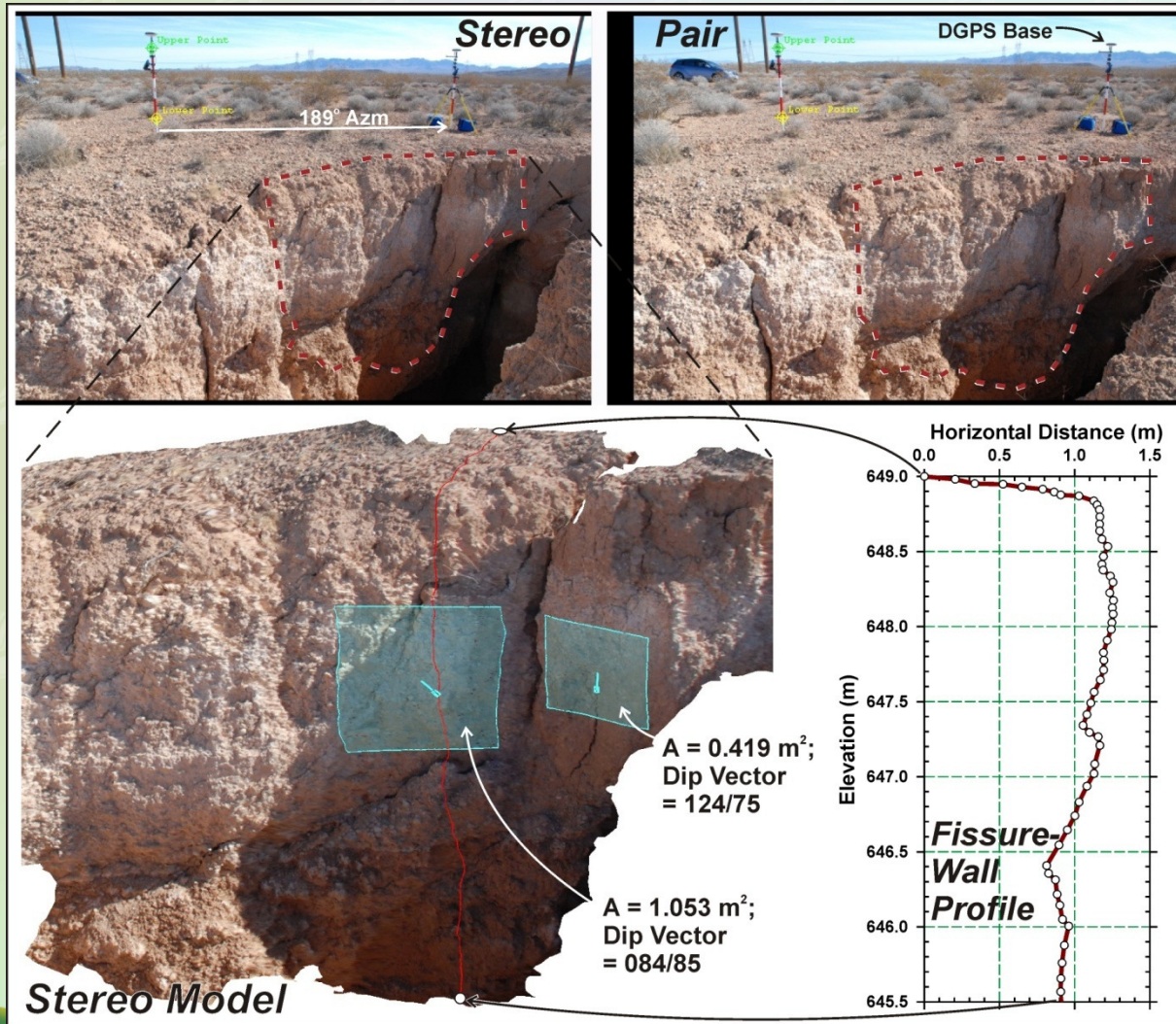




# Stereo Pair of Air Photos



# Earth Fissure





# ShapeMetriX3D

[www.3gsm.at](http://www.3gsm.at)