3G Software & Measurement ShapeMetriX3D

Jeffrey R Keaton



Los Angeles

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Data Acquisition Systems

- Laser scanning
 - Optec
 - Leica Geosystems
 - Others (maybe many?)
- Terrestrial photogrammetry
 - Sirovision
 - Adam Technology

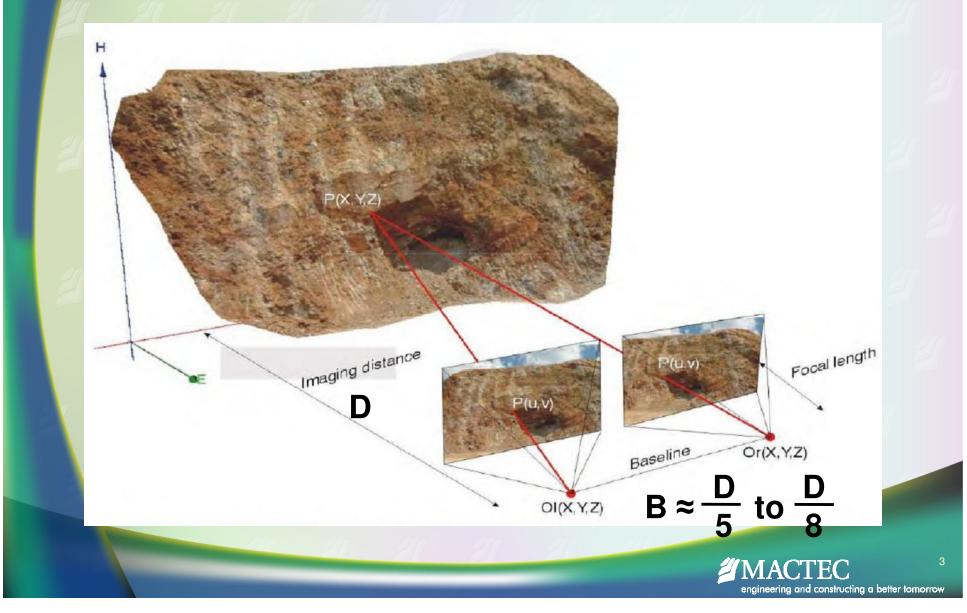


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- 3G Software & Measurement

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Basic Parallax



Stereo Pair with Range Pole





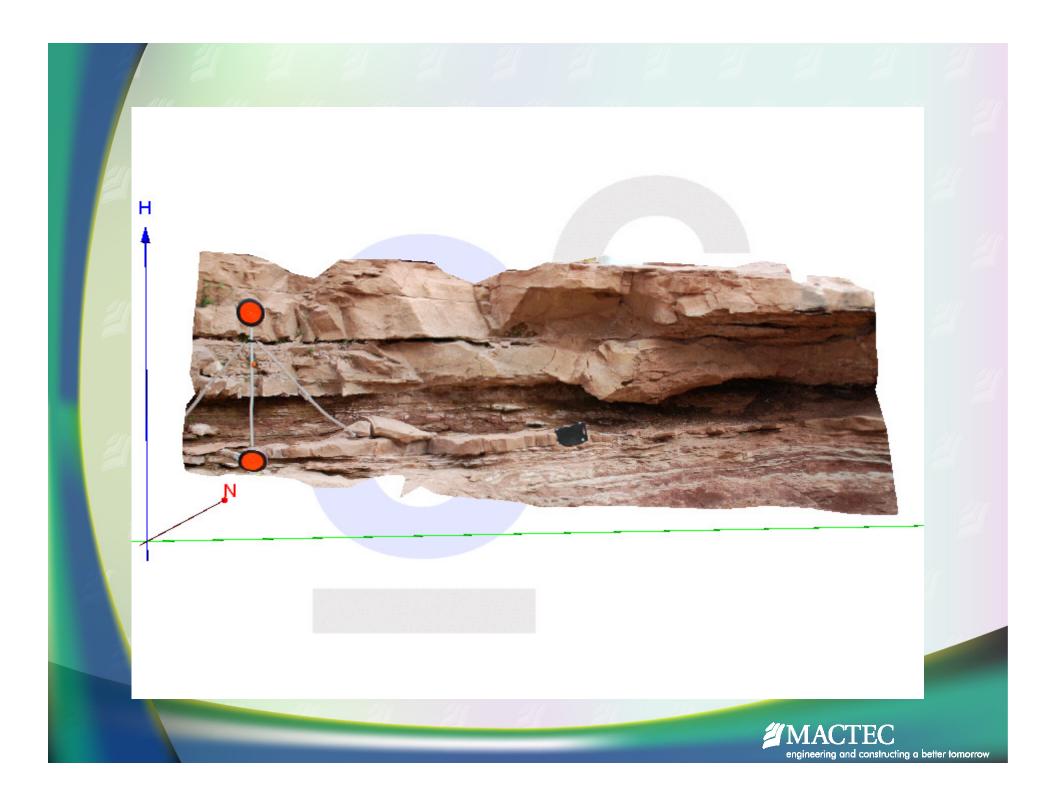
Stereo Model

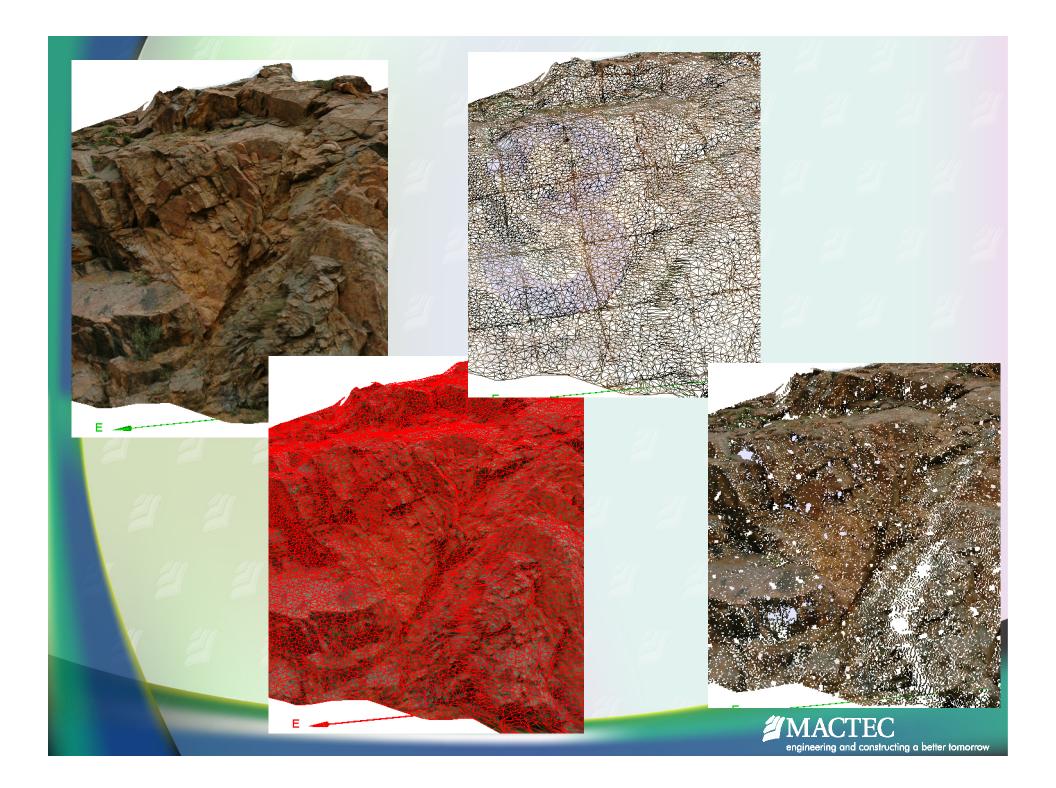


- Handheld digital camera
- Calibrated lens
- Range reference
- Vertical reference
- North reference
- Spatial reference









Range Pole and Ground Target



RESULTS

- 6 X

3711773.00 20311732.00 6247281.00

608360.88

✓ ■ 0.00
✓ 1720.69
✓ 398.87
✓ 1639.27
✓ 1152.24

shallow dipping left

I 1354465.00
I 4502781.50
I 335566.06

2868336.00
457614.62
1409776.88

609843.00

✓ 3936.96
✓ 1605.83
✓ 2424.41

✓ 1788.51
✓ 16603.10
✓ 4225.05

2290.25

🛗 mm / mm² / deg 🕞 🕕

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✓ 7744.13
✓ 5238.40

Zoom

☑ ▲ 8204354.50
☑ ▲ 3067237.50

2

\$ 2925.12 3851.59 6664268.00 10474.59 I0398261.00 · 🗹 🧄 1102067.12 Image: 1041375 44 Fault zones 18878.96 ☑ / 44468.26 22626.81 \$ 8609.81 Ø Pq 0.00 Shallow dipping into 23 \$ 927.25 2186.68 1426.49 4495.65 2614 85 841.13 1635.22 1365.89

3D rock mass parameters

JointMetriX3D Analyst - * Rock slope - medium resolution | sla_mpo.jme File Edit StrukureMap Annotations View Extras Help

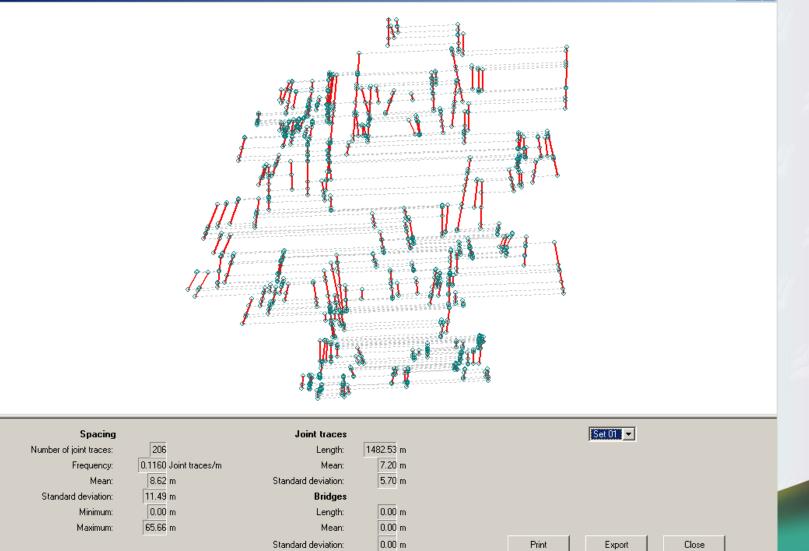
🖻 🗎 🦯 🖍 🌰 📲 💏 🔶

GEOTECHNICAL PARAMETERS

Positions (X,Y,Z) [m] Distances, lengths [m] Areas [m2] Orientations from faces [%] Orientations from traces [%] Bridges Free grouping to sets \rightarrow Spacing, Stereograms Export directly into CAD, MS Excel

SPACING

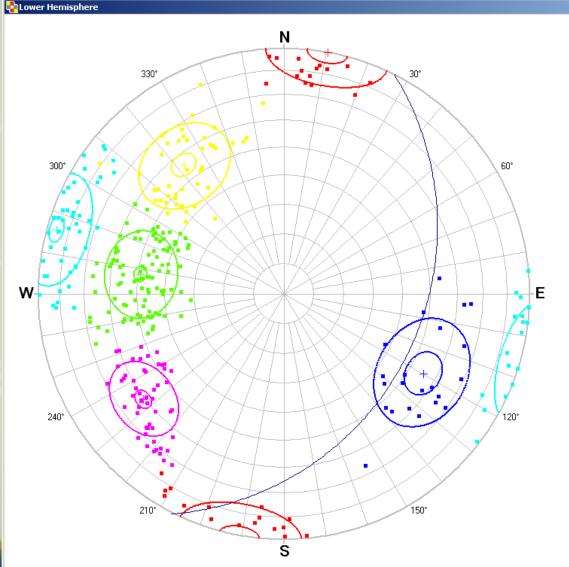


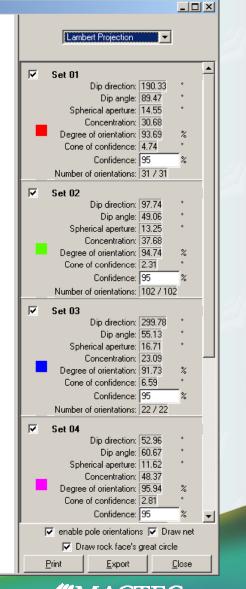


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STEREONET

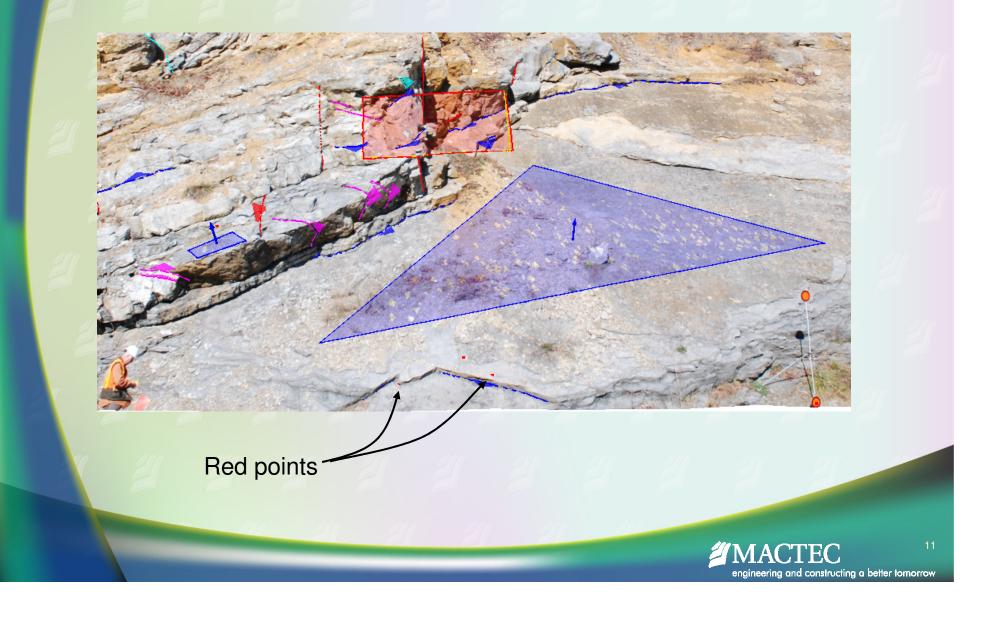




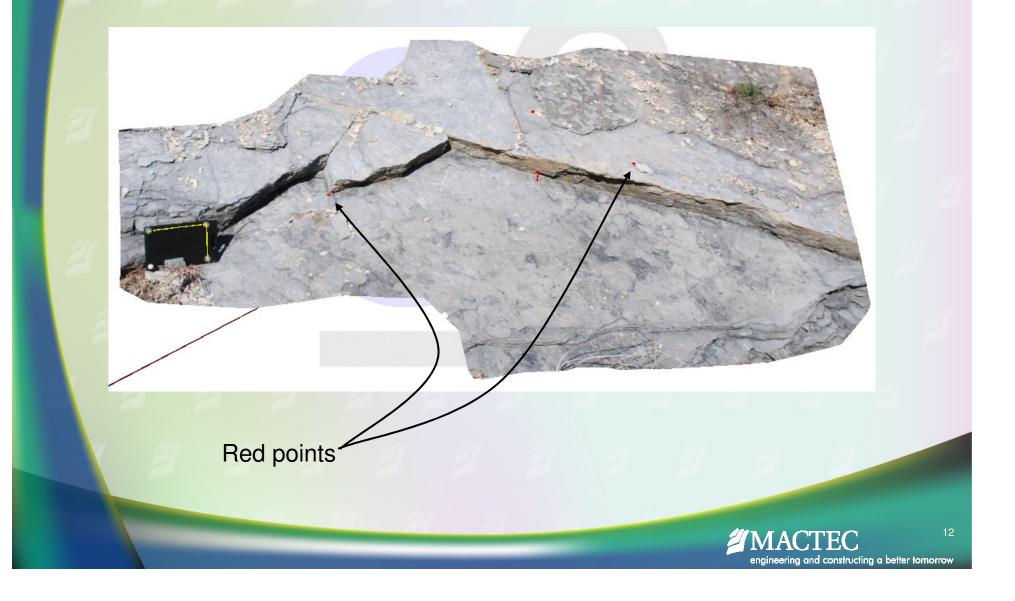
10

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Basic Model – Detailed Model



Basic Model – Detailed Model



Bedding Plane Roughness



Slope Profile

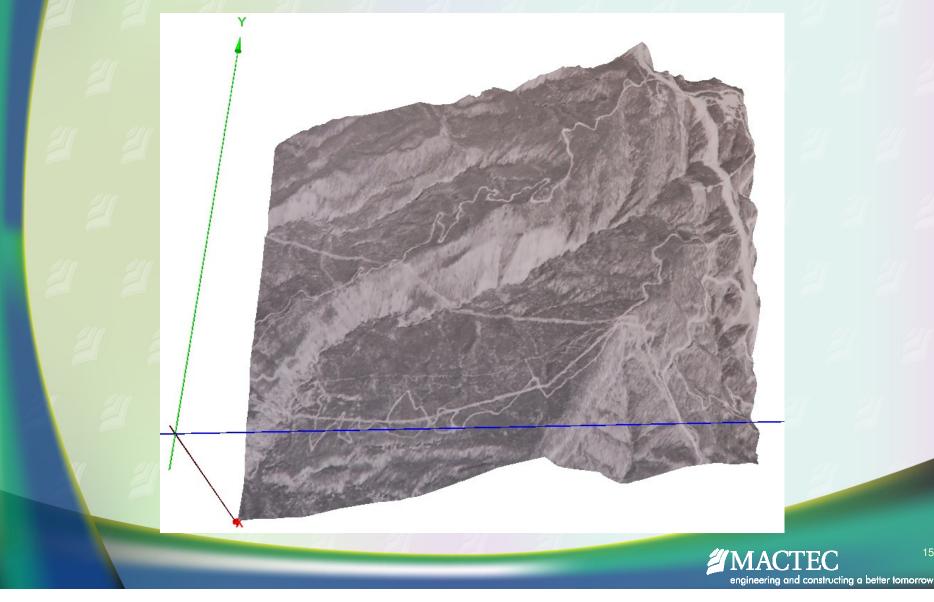


Profile of Sevier River Bluff (looking west)

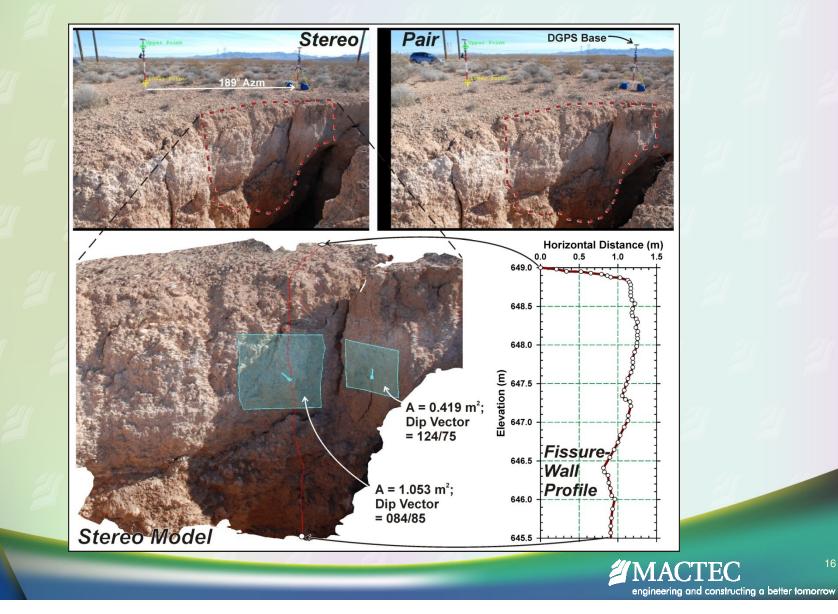




Stereo Pair of Air Photos



Earth Fissure



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