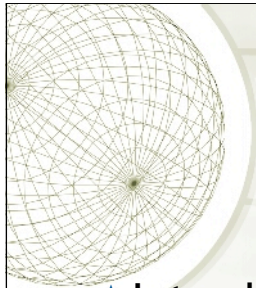


Gravitational Analysis over the Budaghers Fault

Ryan Dearth
University of Colorado
SAGE 2008

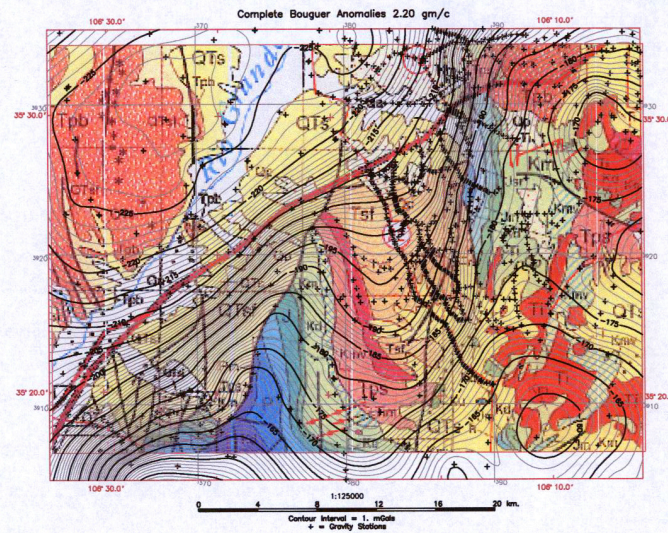




Outline

- ◆ Introduction
- ◆ Equipment
- ◆ Corrections and Featured anomalies
- ◆ Data and Models
- ◆ Conclusions

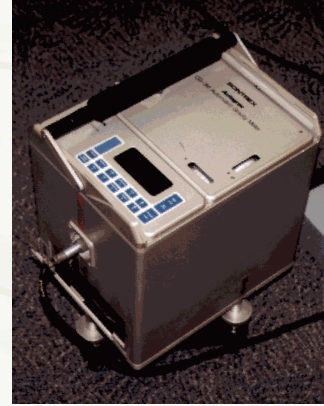
Introduction



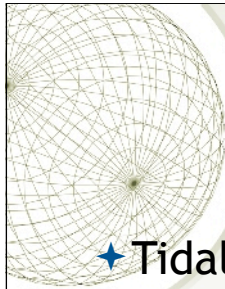
Equipment



✦ GPS



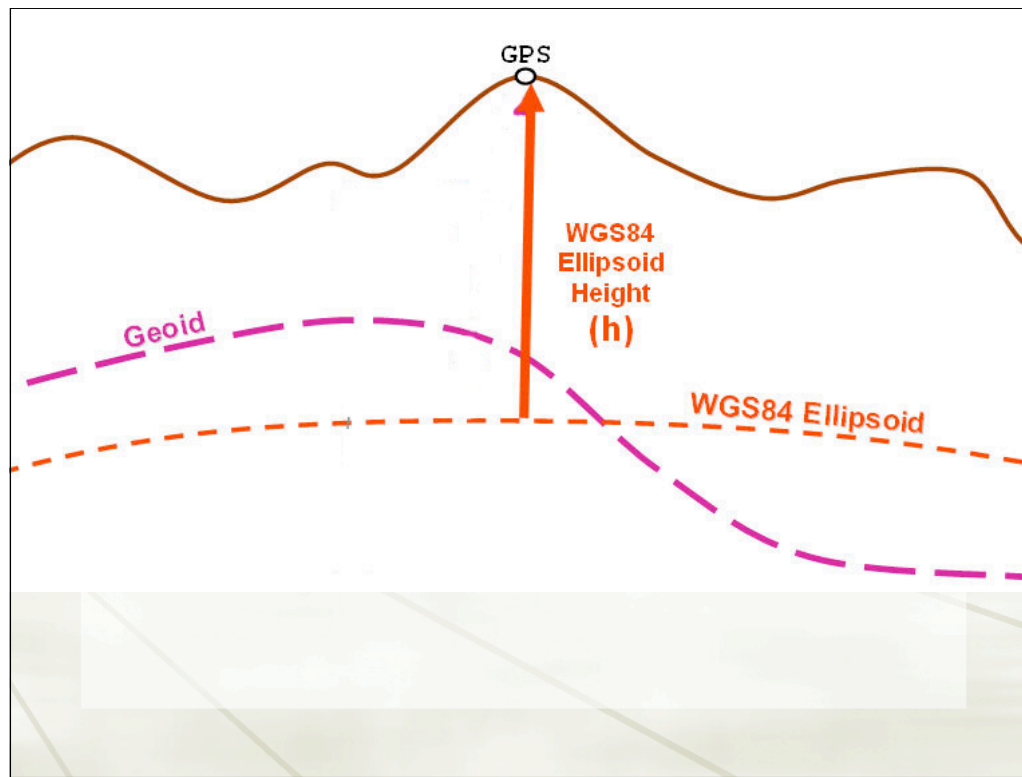
✦ Scintrex Digital Gravity Meter




Gravitational Corrections

- ★ Tidal and Drift
- ★ Latitude Correction
- ★ Free Air Correction
- ★ Bouguer Anomaly
- ★ Terrain Correction
- ★ Next Step: Shawn Fixing Problems



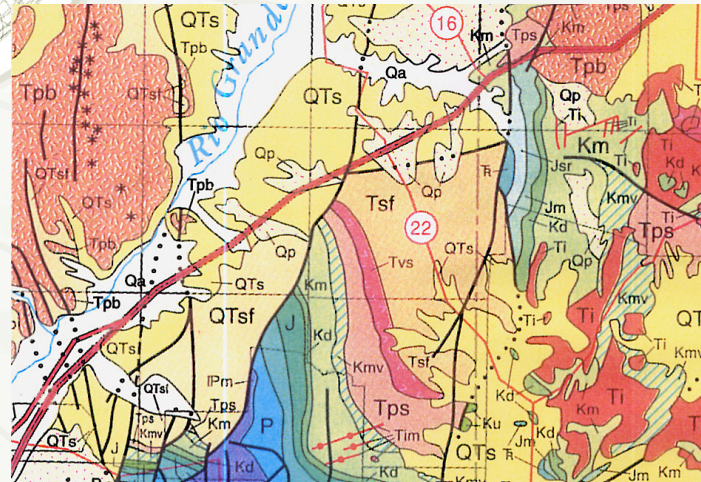




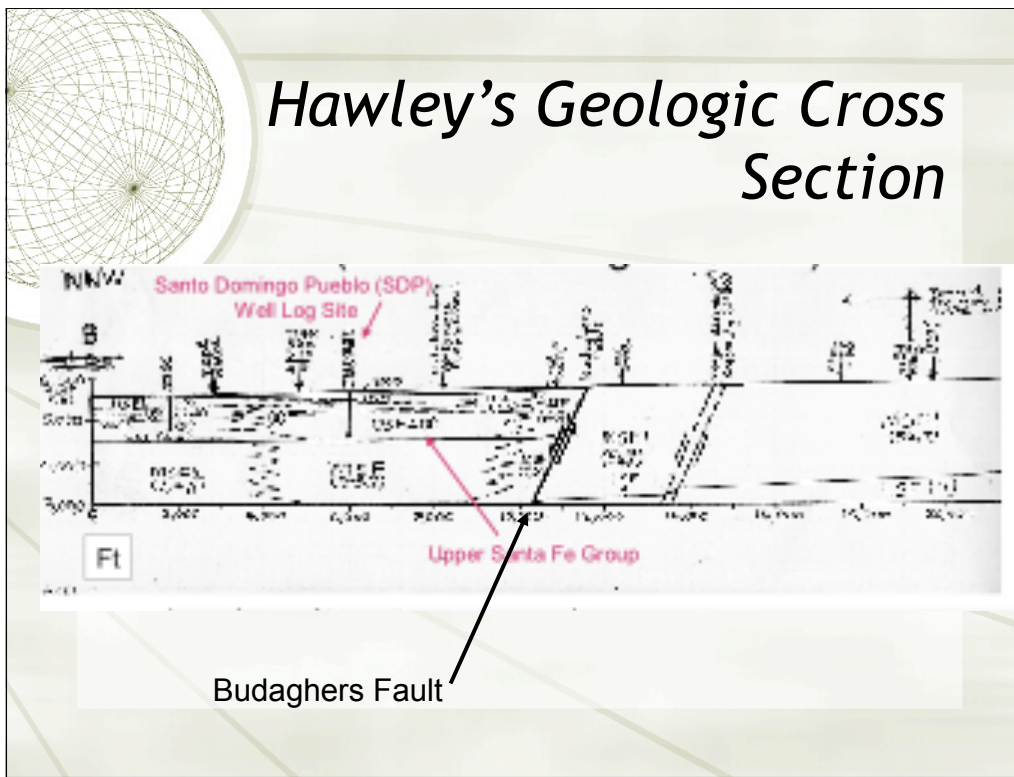
The Most Important Feature

- ◆ Lateral Density Contrast
 - ◆ Ideal for vertical offset faults
 - ◆ Determining basement depths

Regional Geology



Hawley's Geologic Cross Section



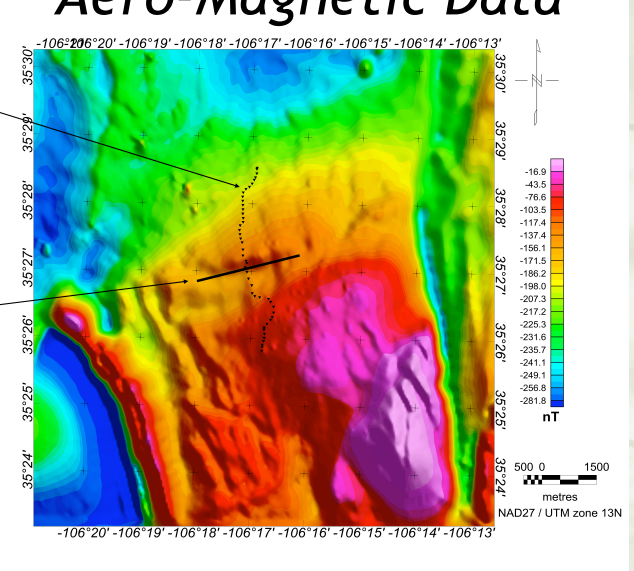
Budaghers Fault

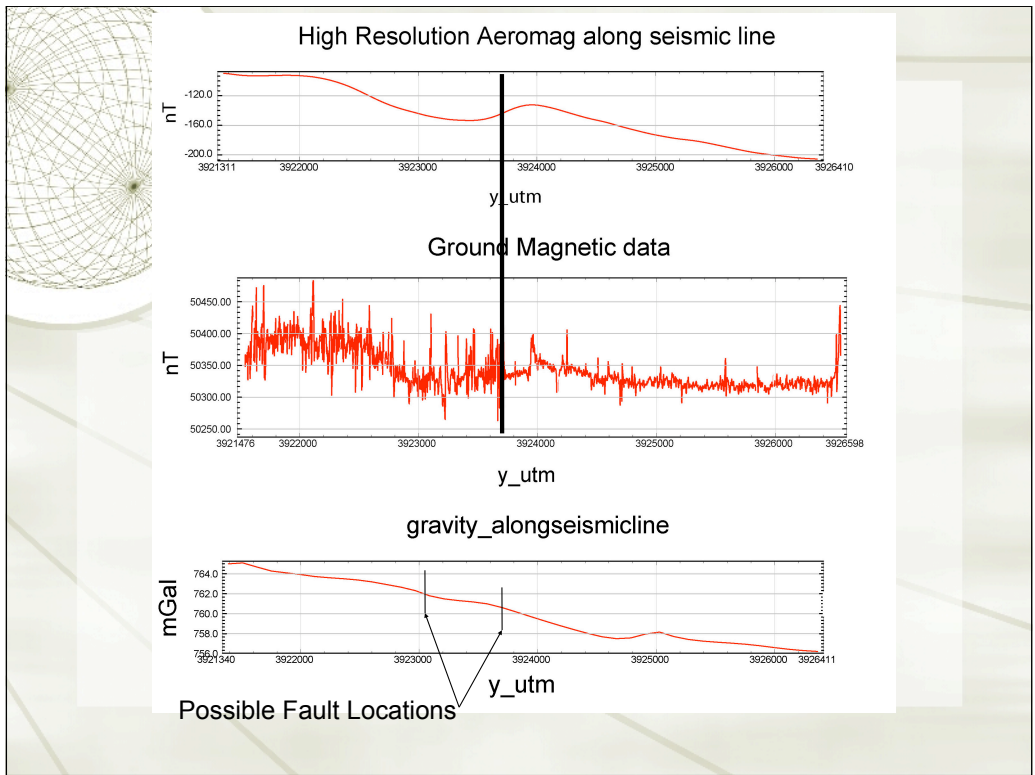
Cross Analysis with Hi-Res Aero-Magnetic Data

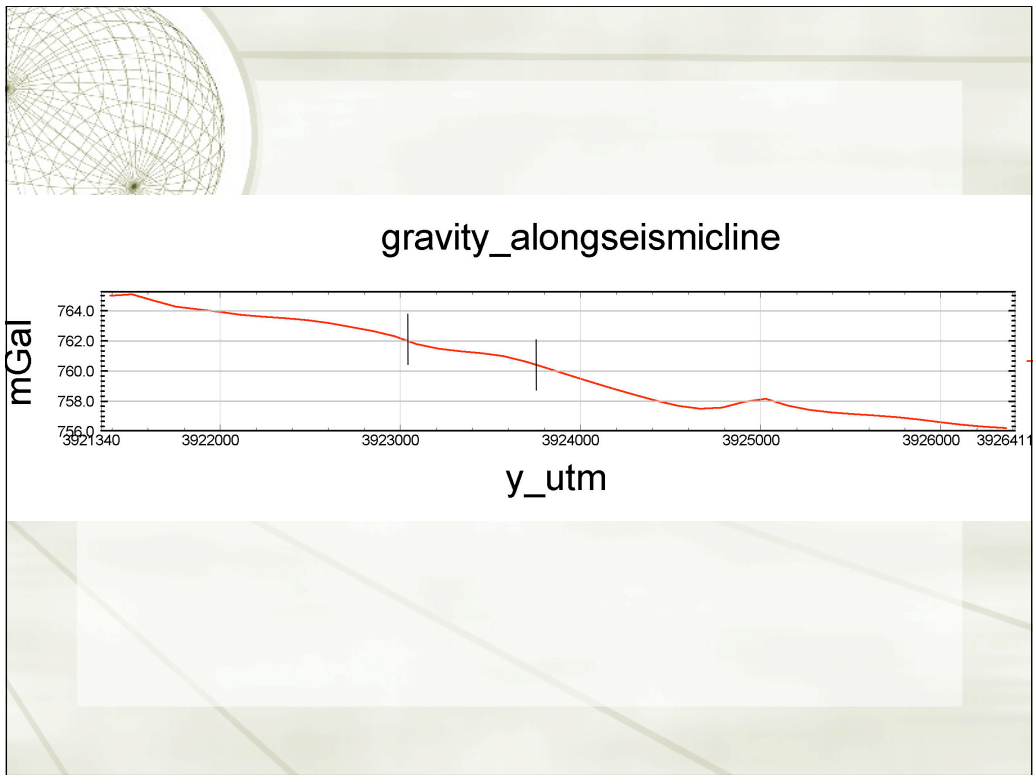


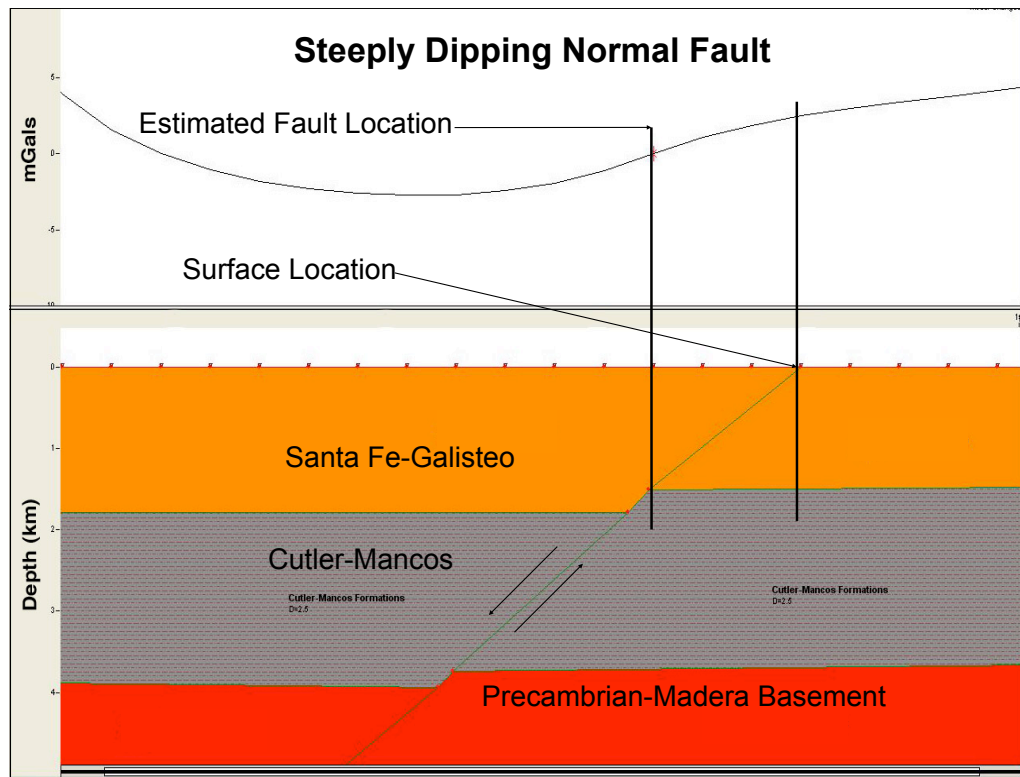
SAGE '08 Seismic Line

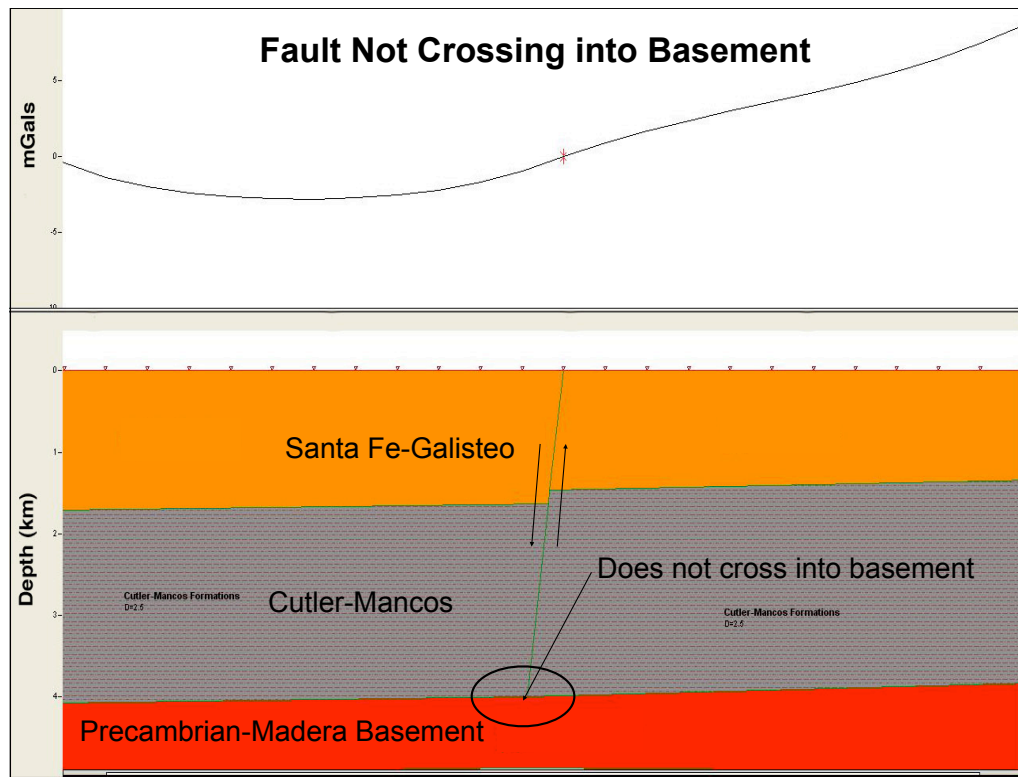
Budaghers Fault







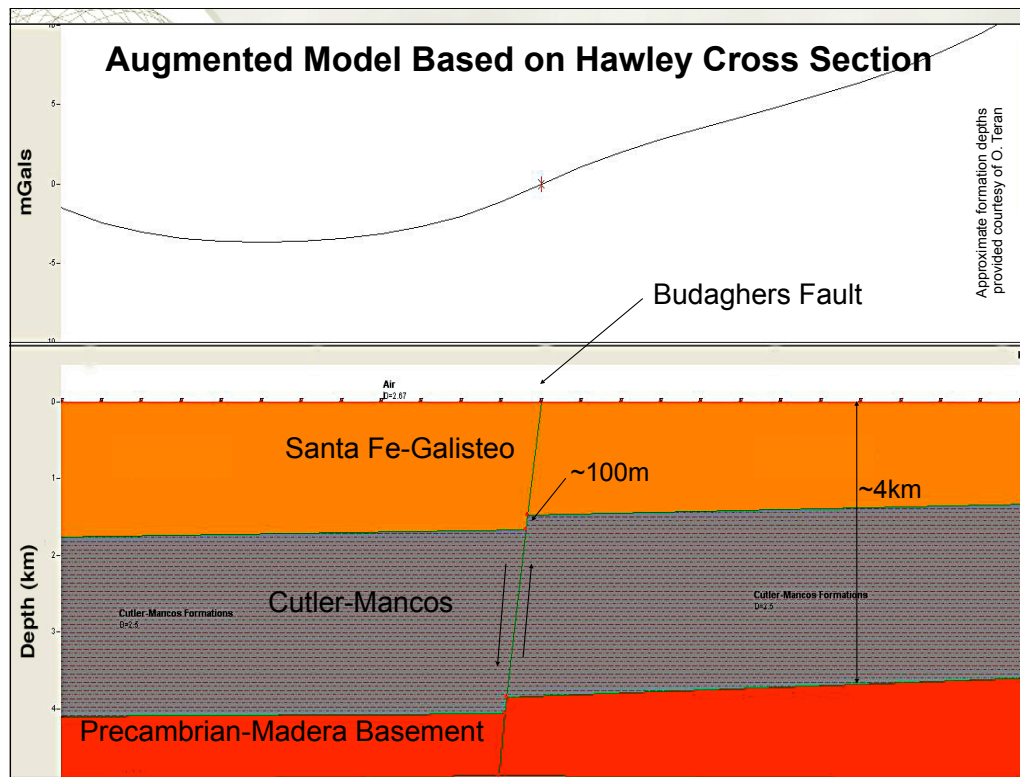


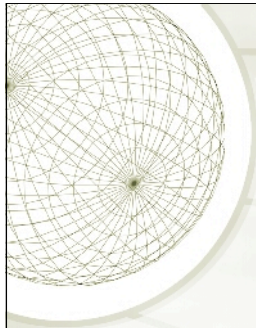




Conclusions

- ✦ The fault is not easily map without better resolution
- ✦ Gravity is non-unique!
- ✦ External parameters are necessary
- ✦ Quality position values are necessary
- ✦ The more constraints available the better





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