THREE-DIMENSIONAL GEOLOGIC MAPS AND VISUALIZATION
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TRADITIONAL GEOLOGIC MAPS

GOALS
* To produce multipurpose geologic maps and databases of the San Francisco Bay region
  Scale typically ~1:100,000 compilation with some new mapping
* To focus new mapping and compilation on special problems
  Scale typically 1:24,000
  * Mapping of step-over regions in strike-slip systems
  * New maps of Quaternary deposits for assessing liquefaction potential
    (with California Geological Survey)
* To produce geologic maps, posters, and other outreach products for the general public

THREE-DIMENSIONAL GEOLOGIC MAPS

GOALS
* To explore the feasibility of constructing 3D equivalents of traditional geologic maps
* To develop methods and tools for constructing 3D geologic maps
* To construct a prototype 3D geologic map as ‘proof of concept’
* To explore methods for analyzing, visualizing, and releasing 3D geologic maps to potential users

PURPOSES
* To communicate complex 3D information to users who are not professional geologists
* To produce realistic earth models to support quantitative, predictive computer simulations of geologic processes
Employment opportunities for geologic mappers

State and Federal Geological Surveys
Mineral Resource Companies
Consulting Geology

Bachelor level - Field assistant, GIS specialist, “journeyman” mapper

Graduate level - Independent mapping, research mapping, project leader
Useful Courses

Field Mapping!

Petrology and petrography

Structural geology

GIS

Intro to everything else (Paleontology, Mineralogy, Potential-field geophysics, Seismic geophysics, Sedimentology and stratigraphy, Geochemistry, Quaternary geology)