SEDIMENTARY BASINS TENTATIVE SYLLABUS
Spring 2009
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TOPICS

- Tectonic settings of Sedimentary Basins
    - Subsidence Analysis
    - Subsidence Modeling (thermal, flexural)
    - Traditional Basin Analysis
- Composition
    - Clay mineralogy
    - Paleocurrent analysis
- Stratigraphic modeling of basin fills:
  Interactions of sediment supply, subsidence and sea level (re: tectonics, climate and sea level)
- Basin Analysis examples
    - Final Reports

Class will require readings, homework, and a large final project
Field trip is possible but to be determined.

Topics 2 and 3: Angevine et al., 1990 Quantitative Sedimentary Basin Modeling: AAPG Short course Note Series #32, 247 pp. Downloadable at:
http://faculty.gg.uwyo.edu/heller/shortcourse(90).htm

Ingersoll, R. V. (1978). "Petrofacies and petrologic evolution of the Late Cretaceous fore-arc basin, northern and central California." J. Geology **86**: 335-352.

Pitman, W. C., III (1978). "Relationship between eustasy and stratigraphic sequences on passive margins." Geol. Soc. Am. Bulletin **89**: 1389-1403.

Paola, C. (2000). "Quantitative models of sedimentary basin filling." Sedimentology **47 (suppl. 1)**: 121-178.

Sloss, L. L. (1962). "Stratigraphic models in exploration." American Association of Petroleum Geologists Bulletin **46**: 1050-1057.