

GEOL/GEGN/PEGN 598B
Carbonate Reservoirs – Exploration to Production
Fall 2009
Wednesdays: 1-3:50PM
BH306

- Aug. 26: Introduction to Carbonate Sediments - Sarg
- Sept. 2: Carbonate Facies & Platform Architecture – Sarg
- Sept. 9: Visitor: Carbonate system – Sarg
- Sept. 16: Cont'd Seismic & Log Expression of Carbonate Platforms - Sarg
- Sept.23: Diagenesis I – Humphrey
1. carbonate chemistry, solutions, and equilibria
2. diagenetic processes & porosity evolution
- Sept.30: Diagenesis II – Humphrey
1. diagenetic environments, processes, and products
2. dolomitization
- Oct.7: Formation Evaluation (I) – Batzle & Prasad
- Oct.14: Formation Evaluation (II) –Prasad & Batzle
- Oct. 21: Formation Evaluation (III) – Batzle & Prasad
- Oct .28: Production Engineering: Reservoir performance – **Kazemi**
1. *Dry gas* vs. *gas-condensate* reservoir performance
2. *Primary, secondary and tertiary oil recovery* performance
- Nov. 4: Formation Evaluation (IV) – Ida Fabricius
- Nov .11: Production Engineering: Introduction – **Kazemi**
1. Flow in *fractures* as compared to flow in porous *matrix*
2. Flow in *dual-porosity* and *multi-continuum* porous media
3. What makes single-phase flow different from multiphase flow

- Nov. 18: Production Engineering: Multi-scale physics - **Kazemi**
1. *Multi-scale physics* of flow and computation in naturally fractured porous rocks
 2. The role of *geomechanics* on fracture flow: *poroelasticity* and *thermoelasticity*
- Nov.25: Seismic & Log Expression of Carbonate Platform – Sarg
- Dec.2: Class Project
- Dec.9: Class Project