

Spring 2007
Geos 692/Pete 692: Topics in Petroleum Geology

Geology of Non-Conventional Hydrocarbon Resources

Friday 9 am, College Coffee House

Successful geoscientists and petroleum engineers continue to learn throughout their careers. In order to do so, we need to feel comfortable learning new material outside the traditional classroom setting. This frequently involves critically reading technical papers, acknowledging that we don't know something, asking questions and discussing technical topics with informed non-geologists/non-engineers. This seminar is designed to help us develop these tools so that we can successfully continue to learn after grad school.

This semester's seminar will focus on the geology behind non-conventional hydrocarbon resources. In order to understand what makes a hydrocarbon deposit 'non-conventional,' we first must have a basic understanding of what makes a conventional resource and how it is produced. Consequently, the seminar will begin with a basic review of petroleum systems and standard drilling and production practices. We will then review papers that describe the geology and production practices for four different non-conventional resources: heavy/viscous oil (including tar sands); gas hydrates; coalbed methane; and tight gas.

The class is open to both geology and petroleum engineering graduate students. Students should be prepared to actively discuss and collaborate with each other on both geologic and engineering issues.

Instructor:

Cathy Hanks: NSF 346, x5562, chanks@gi.alaska.edu
Office Hours: Tuesday, 10:00 am -12:00

Journal articles will be assigned each week for the following class.

Seminar Format & Grading Policy

The seminar is informal. Lively discussions are encouraged and desired. In order to encourage everyone to be prepared for that day's discussion, a student will be picked at random at the beginning of each seminar to summarize the paper for the rest of the class. Consequently the seminar will only be successful if everyone comes prepared to discuss the assigned paper. Please make your best efforts to do so.

At the end of the semester, students will be asked to pair up and prepare a brief 10-15 minute Power Point presentation on a topic of interest.

While this is a Pass/Fail course, your grade will depend upon the quality of your participation in discussions and attendance.

Preliminary Schedule

This schedule is subject to change, depending upon student interest and discovery of good papers. If you find a paper you want to talk about, feel free to give me the reference.

Day	Topic
Jan. 19	Organizational class; Review of Petroleum Systems
26	Hydrocarbon generation and geochemistry
Feb. 2	Drilling a well
9	Conventional hydrocarbon production practices
16	Geology of Viscous and Heavy oil--origin
23	Production of viscous and heavy oil (<i>Reschedule to Wed. am</i>)
March 2	Geology of gas hydrates I
9	Geology of gas hydrates II (<i>Reschedule Class to Wed am</i>)
16	NO CLASS—SPRING BREAK
23	Production of gas hydrates?
30	Geology of Coalbed methane I
April 6	Production of Coalbed methane
13	Tight gas reservoirs
20	Tight gas production practices
27	NO UAF CLASSES
May 4	Student presentations

The University of Alaska Fairbanks implements the Americans with Disability Act (ADA) and insures that UAF students have equal access to the campus and course materials. We will work with the Office of Disabilities Services to provide reasonable accommodation to students with disabilities.