

UNGI/ARMA Distinguished Lecture Series

Lunch and Learn – SPRING 2013



UNGI

ARMA CSM Student Chapter and UNGI extend an invitation to all the faculty and students for a unique presentation by Dr. Yale on Tuesday, February 12, 2013 from 11:30 am to 1 pm in Marquez Hall MZ 108. Hope you will be able to join us.

Geomechanical challenges in unconventional shale resources

By David P. Yale, ExxonMobil Upstream Research Company

The exploitation of “unconventional resources”, namely shale gas and tight gas/ oil formations, has been a boon to the petroleum industry and energy consumers. The key “technology” that has allowed these resources to be unlocked is multiple hydraulic fracture development (with slickwater proppant placement) along closely spaced horizontal wells that has allowed these resources to become commercial after decades of being dismissed as uneconomic to be produced. The complexity of the geology and geomechanics of these reservoirs, the difficulty in getting key data to model and monitor the fractures, and the “learn by the bit” methodology of many producers has led to difficulties in understanding and broadly applying cutting edge geomechanical expertise to improve fracturing and production during the early boon time of the exploitation of these resources.

This talk will explore a some of the geomechanical challenges in oil and gas production from unconventional reservoirs including well and in-situ stress directions and the impact of fracturing on stress direction, the variations in “fracability” of different formation and the interaction with natural fractures, and the difficulty in modeling and predicting fracture geometry and size and fracture performance. The talk is meant to stimulate discussion of the geomechanics surrounding production from shale reservoirs and audience participation is strongly encouraged.

Where: Marquez Hall – MZ 108

When: 11:30 am – 1:00 p.m.

Pizza and beverages will be served.