



# San Joaquin Geological Society

**Date:** Tuesday, October 8<sup>th</sup>, 2013

**Time:** 6:00 PM Social Hour  
7:00 PM Dinner  
8:00 PM Lecture

**Place:** American Legion  
2020 H St. Bakersfield, CA 93301

**PSAAPG Members & Mesozoics**  
\$25 w/ reservation  
\$30 without reservation

**Non PSAAPG Members**  
\$30 w/ reservation

**Full-time Students with ID:**  
Free, Courtesy of Chevron & Occidental

## **SJGS WEBSITE**

<http://www.SanJoaquinGeologicalSociety.org/>

## **SJGS OFFICERS**

### **PRESIDENT**

**Laura Bazeley**  
WZI, Inc.

[lbazeley@wziinc.com](mailto:lbazeley@wziinc.com)

### **VICE PRESIDENT**

**Jonathan Allen**  
Chevron

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### **SECRETARY**

**Evan Bargnesi**  
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### **TREASURER**

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### **PRESIDENT-ELECT**

**Anne Draucker**

### **PAST-PRESIDENT**

**Vaughn Thompson**

## **\* RSVP \***

By: Friday October 4<sup>th</sup>, 2013

By Replying to this email

or by phone 412-5143

or PayPal on the Website:

<http://www.SanJoaquinGeologicalSociety.org/>

## **Hydraulic Fracturing and Earthquakes: Ethically, How Do We Move Forward and Do the Right Thing?**

**Don Clarke**

Consulting Geologist

In 2010 Senator Bingaman of New Mexico requested that Department of Energy Secretary Steven Chu engage the National Research Council (NRC), the operating arm of the National Academy of Sciences and National Academy of Engineering, to form an ad hoc committee to examine the topic of "Induced Seismicity Potential in Energy Technologies." The committee of eleven members was formed from a large set of nominees sent to the NRC staff from a spectrum of professionals in academia, government, and industry and was approved by the chair of the NRC. The committee members, each of whom served pro bono for the duration of the project, brought a wide range of expertise to the study including oil and gas exploration and production, geothermal energy, drilling engineering, fluid injection, seismic monitoring and modeling, seismic hazard assessment, geomechanics, mining engineering, fluid-rock interaction, and regulatory oversight, with professional experience derived from academic research, private industry, and government service. During the course of a year, the committee convened five public information-gathering meetings and produced a consensus report that assessed the current situation related to induced seismicity in the United States for various energy technologies including hazards, risks, government roles and responsibilities, proposed research needs and suggestions on how to move forward. The report stands as an example of how a group of objective professionals with varying viewpoints can come to a consensus and produce a useful, scientifically-grounded document to help guide developments with emerging energy technologies.

### **Don Clarke – Bio**

Donald Clarke teaches petroleum geology at the University of Southern California and works as a consulting geologist for many clients including Occidental Petroleum, Vintage, Signal Hill Petroleum, the cities of Beverly Hills, Newport Beach, Hermosa Beach and Terralog. A long-time member of AAPG, Clarke has served the organization in a variety of positions including Chairman of the House of Delegates and has served on the AAPG Advisory Council and Executive Committee and as the AAPG representative on the Board of Directors of the Petroleum Technology Transfer Council. He has published three geological guidebooks, more than 60 papers and abstracts, and has appeared on the Discovery Channel, National Geographic's "Gallon of Gas," VBS Television's "LA's Hidden Wells," the Canadian show "Trashopolis" and in the Swiss movie "A Crude Awakening." His main areas of research are Los Angeles basin geology and computer mapping techniques. He has also served on the National Research Council's Committee on Geoscience Data and Collections, National Resources in Peril and the Committee on Induced Seismicity Potential in Energy Technologies.