# Geophysical Society of Pittsburgh

**DATE:** Tuesday, February 1st, 2011

**PLACE:** Radisson Hotel - Greentree 101 Radisson Drive, Pittsburgh, PA 15220 412-922-8400

**TIME:** 5:00 PM – Social Hour

6:00 PM – Dinner 7:00 PM – Speaker

**COST:** \$35.00

PAYMENT: Cash or Checks at the door. Please make checks payable to

"Geophysical Society of Pittsburgh"

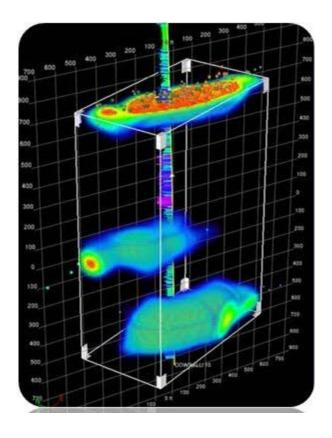
### **DINNER OPTIONS:**

*Breast of Chicken Scampi*, Garlic in a Lemon Butter Sauce, includes salad, bread, and dessert of Carrot Cake. Coffee, Tea, Decaf Coffee, Iced Tea.

Or

*Roast Pork Loin*, Herb Crusted with Apple Chutney, Chef's Selection of Seasonal Vegetables, includes salad, bread, and dessert of Carrot Cake. Coffee, Tea, Decaf Coffee, Iced Tea.

**RSVP** by January 30<sup>th</sup>, to Mr. Philip Towey (email:Philip.Towey@cabotog.com)



## Presentation:

#### The Promises and Pitfalls of Microseismic

Julie Shemeta, MEQ Geo Inc. and Pete Smith, Encana Oil and Gas

Microseismic monitoring of hydraulic fractures is a red-hot geophysical technique, but why? Microseismic is the only real-time far field measure currently available to monitor a hydraulic fracture treatment. The ability to create 4D mapping of hydraulic fracture growth can add enormous value to the development of unconventional resource plays -- thus the promise of microseismic.

This talk will discuss a variety of issues that arise during a microseismic imaging campaign, be it borehole, surface or buried array data. Pitfalls include borehole microseismic issues such as 180 degree ambiguity, velocity modeling concerns, picking versus migration processing. Concerns with surface and buried array microseismic include signal to noise, velocity and static calibration, microseismic radiation pattern issues and the verification of events.

The goal of the talk is to provide a guide for E&P geophysicist to understand some of the key issues in planning, acquisition and processing of microseismic data.

## **Biography**

Julie E. Shemeta is the president and founder of MEQ Geo Inc., a microseismic consulting and services company based in Denver, Colorado. She has worked on microseismic projects in North America, Australia and India including tight gas, shale oil and gas, steam-assisted gravity drainage, and coal seam projects. Intrigued after her work for the U.S. Geological Survey on earthquakes following the 1980 eruption of Mount St. Helen's, she completed a MS degree with a specialty in earthquake seismology at the University of Utah. Her background also includes deep water exploration in the Gulf of Mexico, working in the geothermal industry processing microearthquake data in Indonesia and the Philippines, and working for a microseismic vendor providing data processing and consulting. Ms. Shemeta has been actively involved with the development of software for both data processing and visualization of microseismic throughout her 20-year career. She has served on multiple committees including the Society of Exploration Geophysicists, Society of Petroleum Engineers, and American Association of Petroleum Geologists; she is currently the co-chairman of the Denver's Denver Geological Society/Rocky Mountain Association of Geologists 3D Seismic Symposium, and served as the Denver Geophysical Society Treasurer in 2008-2009. Prior to her MS degree, Julie obtained her B.S. in Geology from the University of Washington.