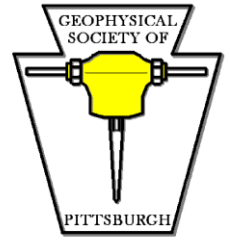


Geophysical Society of Pittsburgh



Tuesday, March 6, 2012 Lecture:

Application of Wavefield Principles to Microseismic and Vertical Seismic Profile Imaging for the Marcellus Play

Brian Fuller*, Marc Sterling, Les Engelbrecht, Rich Van Dok, Larry Walter, Ken Mahrer, Mitch Kniffin, and John Harkrider – APEX HiPoint, Centennial, Colorado and APEX Petroleum Engineering, Englewood, Colorado

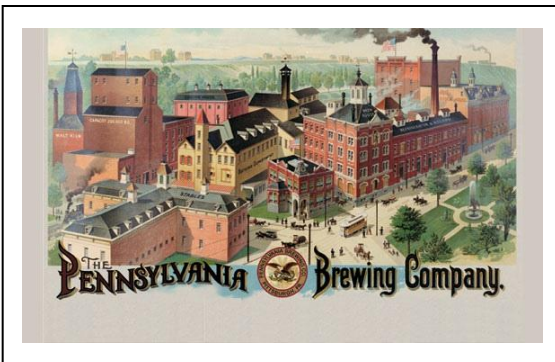
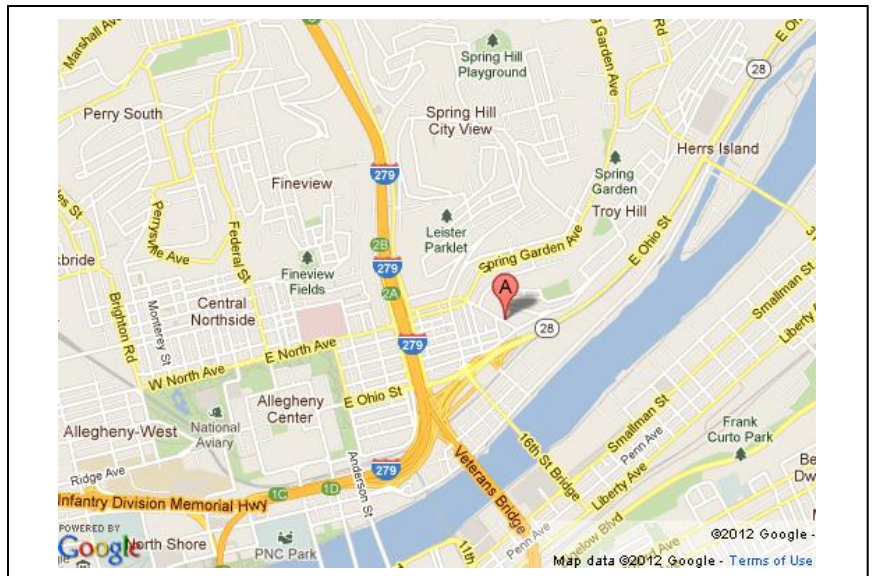
The ultimate value of any data set is the degree to which its cost is outweighed by the value it brings. Toward that end, this talk will discuss the strengths and weaknesses of main-stream microseismic methods, optimal microseismic survey planning, and 2-D VSP imaging to guide the bit in horizontal wells. Each method is judged by its contribution to either producing more hydrocarbons and/or through lowering the cost of production. Example results will be shown from the Marcellus and other formations with numerical estimates of dollar value (i.e., benefits) versus the cost of delivering geophysical information.

Biography: Brian's formal education includes a BS in Geophysics from Western Washington University, Bellingham, Washington and MS and PhD degrees in Geophysics from the University of Wyoming. Brian worked for 3 years starting in 1980 as an exploration geophysicist with Amoco Production Company in Denver followed by graduate school and 7 years in software development with Advance Geophysical. He then joined Paulsson Geophysical where he was a lead software developer and 3D VSP data processor. Since 2003 Brian has worked in 3D VSP and Microseismic applications and founded HiPoint Reservoir Imaging with Marc Sterling, Rich Van Dok, and Les Engelbrecht. He then co-founded APEX-HiPoint which includes a cast of thousands working in microseismic, reservoir characterization, and reservoir engineering applications.



We are pleased to announce that this months lecture will be held at the Penn Brewery Restaurant , located at:

*Penn Brewery Restaurant (Eisenhalle Room)
800 Vinial Street
Pittsburgh, PA 15212, United States
(412) 237-9402*



*Please RSVP using the PayPal link on the Geophysical Society of Pittsburgh website at: www.thegsp.org
Cost for this months meeting is \$35.*

March Lecture Details:



Tidelands Geophysical

5pm Social Hour

We are pleased to announce that this month's social hour is proudly sponsored by Tidelands Geophysical. Thank You!

Hors D'oeuvres

- *Bavarian Hot Pretzels*

Beers on Tap

- *Pale Ale*
- *Penn Kaiser Pils*
- *Penn Dark*
- *Penn Märzen*

5:45pm Dinner Buffet

- *Wiener Schnitzel*
- *Sausages and Sauerkraut*
- *Grilled Vegetable and Penne Pasta Alfredo*

- *Hot German Potato Salad*
- *Rice Pilaf*
- *Fresh Green Beans with Red Peppers*

- *Tossed Green Salad with Ranch, Italian and Balsamic Dressing*

Dessert

- *Raspberry White Chocolate Sheet Cake*

7pm Lecture

- *Application of Wavefield Principles to Microseismic and Vertical Seismic Profile Imaging for the Marcellus Play*

Geophysical Society of Pittsburgh Upcoming Lecture Series:

September 6th: Is there a Place for Non-seismic Exploration in Unconventional Resource Plays

October 4th: The Value of Seismic Data in the Marcellus Shale Play

November 1st: Practical Seismic Petrophysics: The Effective Use of Log Data for Seismic Analysis

December 6th: Closure Stress Gradient Estimation of the Marcellus Shale from Seismic

January 10th: Rank-Reduction-Based 5D Trace Interpolation

February 7th: Microseismic Technology in Fracture Detection

***March 6th: Application of Wavefield Principles to Microseismic and Vertical Seismic Profile
Imaging for the Marcellus Play***

April 3rd: Microseismic Frac (Passive Seismic) Monitoring

May 1st: Pre-stack Depth Migration (PSDM) for Onshore Applications



The GSP October Lecture: The Value of Seismic Data in the Marcellus Shale Play.

Photo: Bill Harbet

We would like to thank our 2011-2012 Corporate Sponsors:

SILVER

GOLD

BRONZE



~~~~~  
**2011-2012 GSP OFFICERS**

- |                          |                     |                                                                                |          |
|--------------------------|---------------------|--------------------------------------------------------------------------------|----------|
| • <i>President:</i>      | Ed Andrews          | <a href="mailto:eandrews@EXCOResources.com">eandrews@EXCOResources.com</a>     | EXCO     |
| • <i>Vice President:</i> | Craig Eckert        | <a href="mailto:ceckert@eqt.com">ceckert@eqt.com</a>                           | EQT      |
| • <i>Treasurer:</i>      | Jim Wigal           | <a href="mailto:jwigal@abartaenergy.com">jwigal@abartaenergy.com</a>           | Abarta   |
| • <i>Secretary:</i>      | Anthony Steenbergen | <a href="mailto:ASTEENBERGEN@talismanusa.com">ASTEENBERGEN@talismanusa.com</a> | Talisman |

~~~~~  
Your Dues and Sponsorship in Geophysical Society of Pittsburgh go toward:

- *Outstanding Monthly Lecture Series*
- *SEG Distinguished Lecturers*
- *Annual Scholarship Awards*
- *Annual Golf Outing*
- *Short Courses*

Please contact Jim Wigal
(jwigal@abartaenergy.com) for
Sponsorship opportunities.

~~~~~  
*Next Month:*

*Passive Seismic Monitoring, Laird Thompson, Global Geophysics, Inc. April 3rd, 2012*