

# Geophysical Society of Pittsburgh



*Tuesday May 1st, 2012 Lecture:*

## **Prestack Depth Migration (PSDM) for Onshore Applications** **Morgan Brown, Wave Imaging Technology**

### **Abstract:**

Depth imaging (PSDM) can greatly improve deep reservoir delineation in any onshore basin where velocity variations cause seismic waves to refract and focus in a complex manner. However, the most advanced wave equation PSDM technologies available today, such as Reverse-Time depth Migration (RTM), are primarily utilized for offshore applications like sub-salt imaging. In this talk, we demonstrate on several onshore US field data examples how PSDM can unmask and correctly position obscured or distorted horizons and faults, reducing exploration risk, and uncovering new prospects in legacy data. We also demonstrate application of cutting-edge PSDM "true angle" attributes for direct hydrocarbon detection and fracture analysis. The presentation is intended for a general geophysical audience.

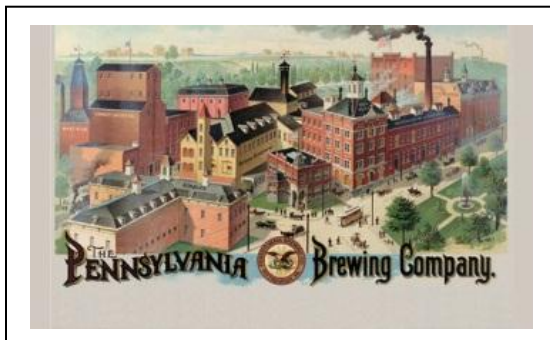
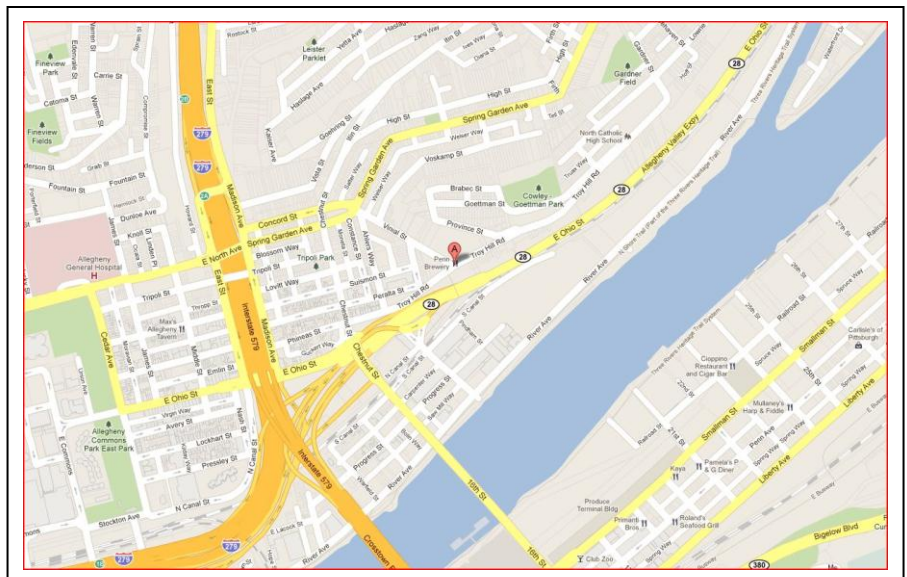
### **Biography:**



Morgan Brown is CEO of Wave Imaging Technology Inc., a specialty seismic processing company leading the onshore depth imaging trend. Brown worked in Geophysical R&D positions for Hess and 3DGeo before joining WIT. He holds a B.A. in applied math from Rice University and a Ph.D. in geophysics from Stanford University. He has 15 years of experience in depth imaging.

*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*

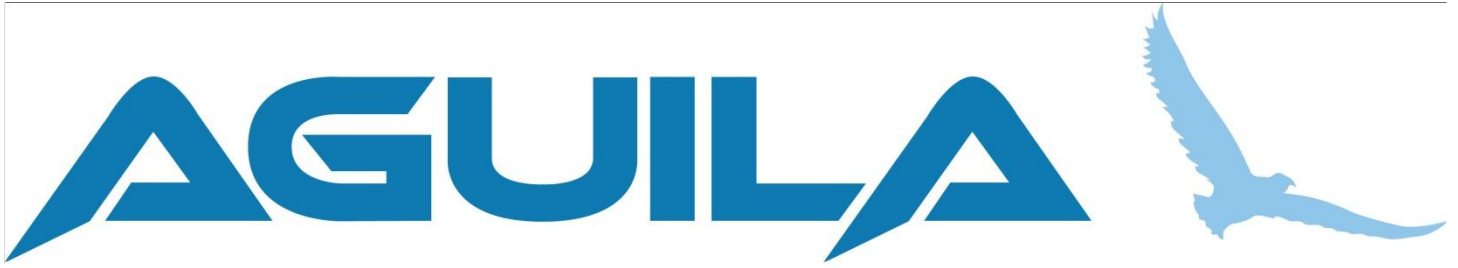


**Please RSVP using the PayPal link on the Geophysical Society of Pittsburgh website at: [www.thegsp.org](http://www.thegsp.org)**

**Please note that registration for this lecture will be limited to the first 100 registrants!**

**Cost for this months meeting is \$35.**

## ***April Lecture Details:***



### **4:45pm Social Hour**

We are pleased to announce that this month's social hour is proudly sponsored by **Aguila**

***Thank You for Your Support!***

### ***Hors D'oeuvres***

- *Side of Smoked Salmon with Pumpernickel, Cream Cheese, Chopped Eggs and Red Onions, and Capers.*

### ***Beers on Tap***

- *Overlook IPA*
- *Penn Weizen*
- *Penn Dark*
- *Penn Pilsner*

### **5:45pm Dinner Buffet**

- *Sausages and Sauerkraut*
- *Black Forest Chicken (breaded chicken breast with ham and beer cheese mustard sauce)*
- *Grilled Vegetable and Penne Pasta Alfredo*
- *Potato Pancakes*
- *Hot German Potato Salad*
- *Tossed Green Salad with Ranch, Italian and Balsamic Dressing*

### ***Dessert***

- *Apple & Cherry Pie*
- *Coffee*

### **7:00pm Lecture**

- *Prestack Depth Migration (PSDM) for Onshore Applications*

## ***Geophysical Society of Pittsburgh 2011-2012 Lecture Series:***

*September 6<sup>th</sup>: Is there a Place for Non-seismic Exploration in Unconventional Resource Plays*

*October 4<sup>th</sup>: The Value of Seismic Data in the Marcellus Shale Play*

*November 1<sup>st</sup>: Practical Seismic Petrophysics: The Effective Use of Log Data for Seismic Analysis*

*December 6<sup>th</sup>: Closure Stress Gradient Estimation of the Marcellus Shale from Seismic*

*January 10<sup>th</sup>: Rank-Reduction-Based 5D Trace Interpolation*

*February 7<sup>th</sup>: Microseismic Monitoring in Shale Field Development*

*March 6<sup>th</sup>: VSP Imaging Technology used for Assisting in Geosteering in Shale*

*April 3<sup>rd</sup>: The Use of Seismic Emission Tomography (SET) for the Direct Mapping of Frac-Induced Fracture Networks*

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



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

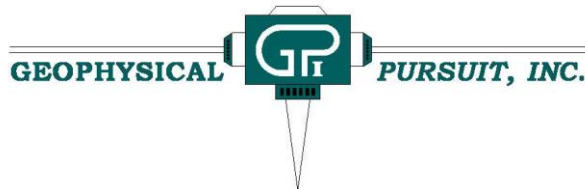
*Photo: Bill Harbet*

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

**SILVER**

**GOLD**

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**2011-2012 GSP OFFICERS**

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

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

Please contact Jim Wigal  
([jwigal@abartaenergy.com](mailto:jwigal@abartaenergy.com)) for  
Sponsorship opportunities.

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*Thanks to all for your continued support in the past 2 years. You have all helped to make the GSP a success and we are honored to serve the Geophysical community of this region!*

# Calendar

- *May, 2012: PAPG Meeting*  
See PAPG [website](#) for details



- *May, 2012: SPE Meeting*  
See SPE [website](#) for details



- *May, 2012: PGS Meeting*  
See PGS [website](#) for details



- *May, 2012: NACBM Forum*  
See [website](#) for details



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## SEG Continuing Education – Spring 2012 – Southpointe Hilton Garden Inn, Pittsburgh, Pennsylvania



- *May 14, 2012: Reservoir Geophysics: Applications by William Abriel (one day)*
- *May 14-15, 2012: May Seismic Fluid Detection, Reservoir Delineation, and Recovery Monitoring: The Rock Physics Basis by Gary Mavko*
- *May 14-15, 2012: Microseismic Monitoring in Oil or Gas Reservoir by Leo Eisner*

Sign up [here](#) for one of these great courses

GSP and its Sponsors are proud to be sending local students to this event thru our scholarship and student grant program.

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### This Summer:

- *August 14, 2012: 2<sup>nd</sup> Annual GSP Golf Tournament - Southpointe Golf Club*  
keep watching newsletters and our [website](#) for more details!

