



# *Geophysical Society of Pittsburgh*



*Proudly Presents Tuesday, February 2<sup>th</sup> , 2016  
At  
Cefalo's Restaurant, Carnegie, PA*

## More from Less, A New Concept in 3D Design and Future Applications in the Appalachian Basin

Tom Fleure

### **Abstract:**

In many areas of the world difficulties in obtaining both environmental and land owner permits have led to increased constraints on surface access for seismic acquisition. These surface constraints can affect both the way we record 3D surveys and the way we think about the 3D design process. Historically, the 3D design process has started with a perfect grid of sources and receivers and subsequently modified source and receiver positions to fit the access constraints. We demonstrate a 3D design sequence better suited for scenarios where source positions will be tied to existing roads and trails and are essentially known a priori. We also introduce the statistical measurement of fold variation and show how this indicator may vary with receiver orientation and show how this was applied on a case study in Brazil.

In the second part of the presentation we will review data quality from a recent dynamite 3D survey in the coal mining country of eastern Ohio focused on the Utica Shale. We will identify useful offset range at the target horizon after adjusting for anisotropy and show the relationship between seismic bandwidth and weathering thickness. We will then demonstrate how future high fold 3D programs in the Appalachian Basin could be recorded using vibroseis at a significantly lower cost basis.



### **Biography:**

*With more than 30 years of experience in the seismic industry, Tom Fleure has a broad knowledge of exploration geophysics ranging from field parameter design to signal processing. More specifically, his areas of expertise and research have included advanced vibroseis techniques and custom designs of explosives for application as seismic sources.*

*Mr. Fleure is the inventor or co-inventor on two patents in these research areas. Prior to joining Global he held several senior management positions, both in technology and operations, with Western Geophysical and its successor WesternGeco and is co-founder of Global Geophysical where he serves as Senior Vice President and Chief Technology Officer. Fleure has a bachelor's degree in geophysical engineering from the Colorado School of Mines.*

*Please RSVP using the PayPal link on the Geophysical Society of Pittsburgh website at: [www.thegsp.org](http://www.thegsp.org)  
Cost: \$35 Members, \$40 Non-members (\$20 for Students). Meeting Location: 428 Washington Ave, Carnegie, PA 15106  
(412) 276-6600. Note the significant detour warning on page 2 of the newsletter.*

*February 2<sup>nd</sup> , 2016 Agenda*

*5:00 pm Social Hour (Beer and Wine) sponsored by*



*6:00 pm Dinner Buffet*

*7:00 pm Lecture – Sponsored by*

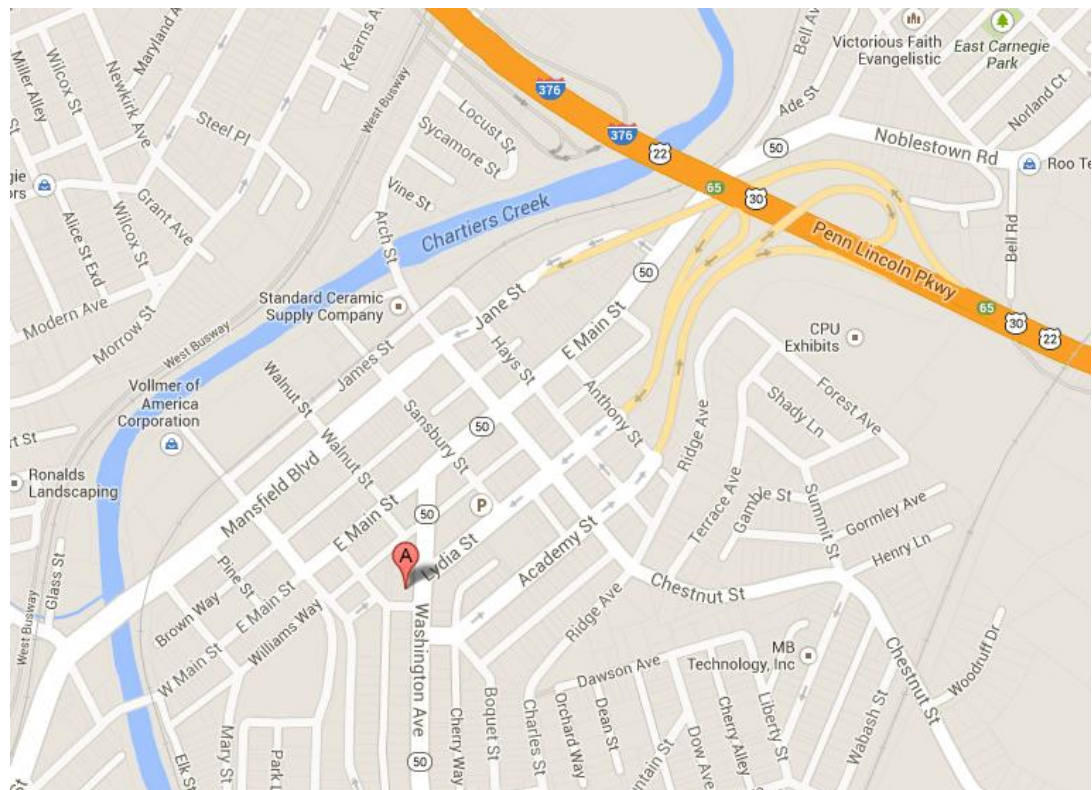


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*This months lecture will be held at :*

**Cefalo's**

**Banquet & Event Center**  
428 Washington Ave.  
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412.276.6600



*We would like to thank our 2015-2016 Corporate Sponsors:*

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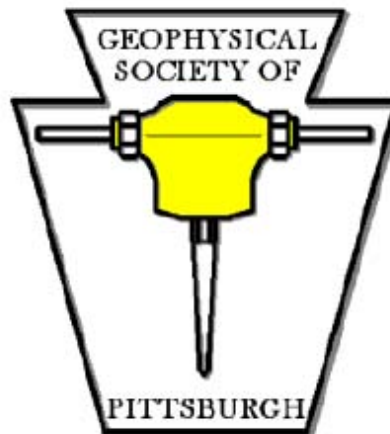
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