



Geophysical Society of Pittsburgh



*Proudly Presents Tuesday, September 20th, 2016
At
Cefalo's Restaurant, Carnegie, PA*

Structural Origin of Henderson Dome: Stratigraphic & Geophysical Study of an Upper Ordovician Impact Crater

Travis Duran and Andrew Smith

Abstract: Henderson Dome is an anomalous 8km wide, roughly circular structural oil & gas field in Mercer Co, PA. Earliest production goes back more than a century in the Upper Devonian sandstones which are now used for gas storage. Deeper production from the Upper Silurian Lockport Dolomite is more notable, as commercial accumulations are uncommon outside of this field. The crest of the dome structure does not migrate with depth, though there is evidence of erosional beveling inferred from the absence of regionally persistent formations in the Lower Silurian and Upper Ordovician. Previous interpretations suggested deformation in the Cambrian basement that was linked to several speculative origins for the field. Stratigraphic analysis of Silurian formations suggest intermittent vertical reactivation of faults within the dome that may be related to Appalachian basin orogenic episodes.

With the help of modern 2D seismic data, the origin of this uplift can be linked to a late Ordovician disturbance that mimics the outline of the dome. This presentation will discuss evidence that this disturbance resulted from an ancient meteorite impact during the Ordovician. This study details how this impact may have caused the uplifted section seen throughout the Silurian and Devonian that defines Henderson Dome.



Biography:

Travis Duran has been a geophysicist at Seneca Resources since 2014 where his focus is exploring and developing the Marcellus and Utica in Pennsylvania. Travis studied at Cornell University for 5 years, receiving his Bachelors in Applied Engineering Physics and Masters in Geophysics. His two fold master's program focused on experimental compartmentalization of reservoirs via capillary sealing and data mining procedures for seismic attribute analysis. Travis also served as the president of the SEG student chapter at Cornell and has been a member of the GSP for two years. A native to the Pittsburgh, Travis operates a small family farm where he raises cattle and corn. As a hobby, Travis restores antique tractors in an effort to preserve agricultural history.

*Please RSVP using the PayPal link on the Geophysical Society of Pittsburgh website at: 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.*

*September 20th, 2016 (*3rd Tuesday) Agenda*

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



6:00 pm Dinner Buffet

7:00 pm Lecture – Sponsored by

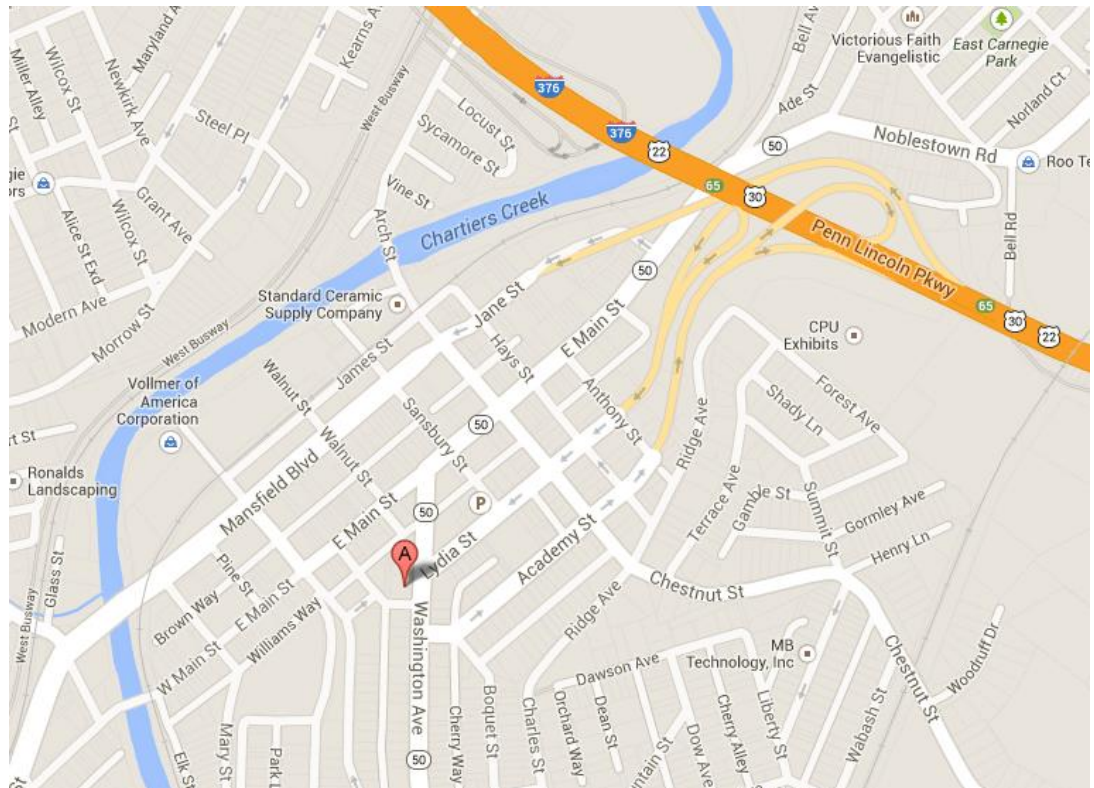


To receive CEU certificate from this lecture please email: emdrob@gmail.com

This months lecture will be held at :

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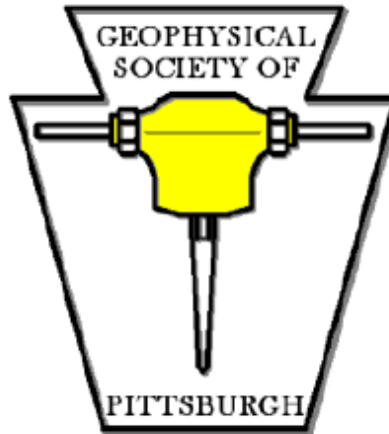
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