



PTTC-Sponsored Field Trip

July 22-24, 2015

Hilton Garden Inn

Ithaca, NY



Appalachian Basin Gas Shale

FIELD TRIP DESCRIPTION

The Appalachian basin is one of the world's largest gas shale basins, largely because of its stacked black shales sandwiched between the Ordovician Utica Shale and the Mississippian Sunbury Shale. The Finger Lakes Region of New York offers spectacular views of a number of these black shales. This is the region where Pearl Sheldon (1912) first came to appreciate the unique fracture fabric associated with black shale. Later studies left little doubt that maturation of organic material generated a sufficient pore pressure to drive Sheldon's joints as natural hydraulic fractures as summarized in Engelder, Lash, and Uzcatequi (2009). This two-day trip will focus on the relationship between gas shales and the initiation, propagation and arrest of natural hydraulic fractures during early burial and the subsequent Late Paleozoic Alleghanian Orogeny in the Appalachian Mountains.

Outcrops will include: Marcellus (Oatka Creek) black shale, Moscow black shale, Geneseo black shale, Middlesex black shale, Tully Limestone, and Ithaca Group (rocks between Geneseo and Middlesex).

Field Equipment: Water proof boots or Texas (not flip-flops) for viewing stream outcrops. Otherwise, the usual summer gear.

ABOUT THE INSTRUCTOR

Dr. Terry Engelder is Professor of Geosciences at The Pennsylvania State University, his alma mater (B.S. 1968). Additional degrees were earned at Yale (M.S. 1972) and Texas A&M (Ph.D. 1973). Over the past 45+ years of experience in the Appalachian basin, Dr. Engelder has become a recognized expert in the fields of structural geology, geological fracture mechanics, rock mechanics and Appalachian tectonics. During more recent years, he has come to the forefront as an expert regarding the geology and resource potential of the vast Marcellus Shale play. This field trip will highlight many of the key outcrops among the hundreds he has studied during four decades of field work in central New York.

LOCATION & HOUSING

The headquarters hotel will be the Hilton Garden Inn, Ithaca, NY. A room will be reserved at the hotel for each person when they register for the field trip.

REGISTRATION: ONLINE IN CONJUNCTION WITH EURTEC

This is a post-meeting field trip attached to the URTEC conference, hosted by AAPG, SPE and SEG in San Antonio, TX on July 20-22. However, **it is not necessary** to attend the meeting to be eligible to participate in the field trip. To register for the field trip, go to

<https://events.thepulsenetwork.com/Attendee/Default.aspx?C=70000063&M=60000338&Mode=HTML>

and click on “Short Course/Field trip (not attending the conference),” and then continue through the following pages. A \$30 charge will be added to the cost of the field trip when you select this option.

The cost of the field trip includes ground transportation, three nights lodging (single occupancy), a field guide, and all meals on the two field trip days (23rd & 24th).

Registration already has begun and is limited to the first 25 who register, so if interested register now!

PDH CREDITS

PTTC will issue a certificate for Professional Development Hours at the end of the field trip. To receive this certificate, **you must register in advance**.

ADDITIONAL INFORMATION

For further information contact: Dr. Engelder at 814-865-3620, or engelder@geosc.psu.edu.