

CUSTOM CORPORATE FIELD TRIPS

Stratigraphy & Structure of the Appalachian Basin

Marcellus & Utica Shales



Contact Mike Canich to develop a customized field trip

Trips available from 1 to 5 days in duration, depending on desired content

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CENTRAL PENNSYLVANIA GEOLOGIC FIELD TRIPS

Mike Canich and Duff Gold



FIELD TRIP LEADERS

- Mike Canich
 - 39 years Petroleum Geology Experience
 - Geologic Management and Field Operations Expertise
- Duff Gold
 - Professor Emeritus, Penn State University
 - Structural, Economic Geology, Geo-mechanics Expertise
 - Extensive Field Geology Experience

POSSIBLE FIELD TRIP THEMES

- Black Shale deposits (Marcellus and Utica)
- Mid-Ordovician Carbonate Stratigraphy
- Structural Styles
- Local Industrial Minerals
- Construction Materials
- Potential Construction Hazards - I-99 Case Study
- Sinkholes
- Bentonites

VALUE & DISCUSSION POINTS

- Leaders with over 100 years of geologic expertise
- Subsurface and Surface Perspective
- Team building with company employees in multiple disciplines: geologists, engineers, geophysicists, managers
- Running narratives during the trip with a leader or associate in each vehicle addressing historical and economic impact of geology on Central Pennsylvania

VALUE AND DISCUSSION POINTS 2

- Scale and style of structures
- “Thin skin” versus “penetrative” tectonism
- Stratigraphic and structural similarities and differences between subsurface and outcrop
- The importance of the imposed structural elements: cleavage and natural hydraulic fractures
- Discussion of joint formation and propagation
- The role of “cross-strike” and “strike” joints in gas exploitation

VALUE AND DISCUSSION POINTS 3

- Structural complexities associated with thrust sheets, basement faults, thin skinned tectonics, etc
- Use of bentonites as stratigraphic markers
- Sequence of imposed events

OUTCROP EXAMPLES



All photos from 82nd Pennsylvania Field Conference Guidebook 2017

INTERESTED?

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