Special AAPG Short Course on Well Log Analysis

Saturday and Sunday, 17-18 September 2005
Waterfront A&B

Note: Anyone interested in taking this course must register directly with the AAPG Education Department in Tulsa using the form provided!

Who Should Attend: Geologists, engineers, geophysicists and other professionals with a need to understand the responses of common logging measurements to subsurface conditions and become familiar with basic open hole well log interpretation techniques.

About the Course: This course will offer a “hands-on” approach to open hole well log analysis and interpretation while focusing on the traditional interpretation targets of lithology, porosity and fluid saturation. A variety of interpretation techniques will be introduced, including computational to visual (pattern recognition), and the use of some older techniques in the context of the availability of newer, more extensive, data. The course will address logging measurements which are grouped by their interpretation goals, rather than by their measurement physics. The common measurements will be described in sufficient detail for an understanding of their response to subsurface conditions (borehole and formation). Exercises using data from a variety of locations and environments will reinforce the covered interpretation techniques. Both algorithmic and graphical pattern recognition techniques will be covered, as will techniques which use multiple measurements in concert.

Course Content: The course will strive to provide a strong and coherent foundation for the understanding of other, specialized interpretation techniques involving well log data which will not be covered. Topics that will be covered include: an overview of petrophysical well log data acquisition; description of correlation/lithology, porosity and fluid saturation from logs; interpretive techniques using logs individually and in combination; and interpretation exercises to reinforce the interpretation methods discussed.

Duration/Credit Hours: 2 days (PTTC will provide Professional Development Hour certificates to all who complete the full two-day course.)

Instructor: Daniel A. Krygowski, who currently is with ChevronTexaco in Houston, Texas, was formerly a petrophysicist with Landmark Graphics, where he was involved with petrophysical and user interface development in a number of software products, primarily PetroWorks. He previously held a variety of technical and management positions in petrophysics and software development at ARCO and Cities Service Company. He holds M.S. and Ph.D. degrees in geophysics from the Colorado School of Mines.

Cost: $100, payable directly to AAPG, not with the ES AAPG meeting registration fees.

Rocks to Models: An Introduction to 3-D Reservoir Characterization and Modeling

Wednesday, September 21
Waterfront A&B

Who Should Attend: Geologists, geophysicists, and engineers involved in reservoir characterization and 3-D geologic modeling.

About the Course: This course provides an overview of 3-D reservoir characterization and modeling concepts and methods. The course addresses different types of petroleum reservoirs (carbonates, sandstones, fractures) and techniques to define or estimate reservoir architecture and reservoir properties within a sequence-stratigraphic and structural framework.

Course Content: The material includes an overview of the objectives for reservoir characterization, analysis of porosity (pore types, porosity classifications) and permeability (matrix, fracture), and common methods used to identify reservoir flow units. We will review stratigraphically- and structurally-compartmentalized reservoirs. We will emphasize the role and significance of outcrop analogs for reservoir characterization and modeling using case studies.

The course covers common methods of constructing 3-D geologic models of petroleum reservoirs. This includes an overview of 3-D geologic modeling techniques, common cell-based (pixel-based) methods, object-based methods, and the use of 3-D seismic data for conditioning reservoir models.

Duration/Credit Hours: 1 day. Certificates of Professional Development Hours (PDH) will be awarded at the end of the workshop.

Instructors: Matt Pranter (University of Colorado, Boulder Colorado) and Neil Hurley (Colorado School of Mines, Golden, Colorado)

Cost: $75 (Co-sponsored by PTTC)

Limit: 45 persons