

Carbonate Petrophysics

Course Description:

This one-day course in carbonate log analysis is built around a Flow Chart for Carbonate Well Log Analysis. The flowchart is designed so the user can determine carbonate pore type or types, and if the carbonate is water-wet or oil-wet using comparisons of nuclear porosity/sonic porosity/resistivity porosity plus comparisons of Archie ($a=1, m=n=2$) and Ratio Water Saturations. Next, on the flow chart the moveable hydrocarbon index (S_w/S_{xo}) and bulk volume water (BVW) values are used to determine if the carbonate reservoir is hydrocarbon or water productive. The final steps on the flow chart are the additional techniques that are used in the final analysis of carbonate reservoirs. The basic principles of carbonate well log analysis will be outlined, as well as critical cut-off values, and how to use the flowchart. Seventeen problems will be presented to illustrate the application of the flow chart in carbonate well log analysis. Using the log analysis of each of the seventeen problems along with The Flow Chart for Carbonate Well Log Analysis, the following questions will be presented on a worksheet:

- Pore type or types
- Water-wet or oil-wet and
- Hydrocarbon, water-cut hydrocarbons or water productive

Prerequisites: A basic knowledge of Well Log Analysis.

Instructor:

George B. Asquith, Ph.D. (University of Wisconsin/Madison) is a Professor of Geosciences at Texas Tech University and a former recipient of the Pevehouse Chair in Petroleum Geology. At Texas Tech he has served as a Director with The Center for Applied Petrophysical and Reservoir Studies. In 2018 Dr. Asquith was awarded Distinguished Alumnus from the University of Wisconsin Geosciences. Dr. Asquith has received AAPG's Harrison Schmitt Award, Presidents Award, Distinguished Educator Award, and the Levenson Award. During his career he has published numerous abstracts, papers and books including the best-selling AAPG book *Basic Well Log Analysis*. Additionally, he has worked for ARCO Research, Pioneer and Mesa Petroleum, Search Drilling and Alpar Resources. Dr. Asquith currently teaches a variety of training courses including Hydrocarbon-Bearing Mud Rocks, Shaly Sand Analysis, Old E log Analysis, Basic Well Log Analysis, and Carbonate Petrophysics.

Date & Time:

January 27, 2022
Thursday
8:00 am to 5:00 pm

Location:

Midland College PPDC
105 W. Illinois Ave.
Midland, TX 79701

Cost:

In-State: \$500.00
Out-of-State: \$525.00

Section Number:

PTRT2010.OG17212Q

Number of CEUs:

0.8 CEUs



For registration, visit our website at <https://mcce.midland.edu> > Oil and Gas Training > Geoscience

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