

Course: Reservoir Characterization and Production Properties of Shale Reservoirs

TRAINER: Randall S. "Randy" Miller

Duration:
1 day

Price:
Member: U\$S 500
Non members: U\$S 600

Program

Organic Geochemistry

A discussion on Kerogen types, summary of geochemical characteristics and implications in resource plays, TOC and Rock Eval Analysis use in evaluating productive potential in resources plays, TOC modeling. Determining generative vs non-generative TOC values. Use of TOC values to determine potential hydrocarbon producibility.

Petrophysical Properties

Types of permeability and porosity measurements and their applications in unconventional reservoirs and what type of permeability to use. Understanding core analysis permeability. Determining K_m (dry gas basis) and relative permeability modeling in liquids rich reservoirs. Matrix Permeability and its influence on production, Bulk Volume Water modeling, permeability as a function of stress. Mercury injection porosimetry. Texture and pore structure in shales and their effects on porosity and permeability.

Geomechanical Properties for Frac Designs

Calibration of rock properties and stress profile determination in unconventional reservoirs, fracture geometry and computation for stress profiling, core geomechanical properties, fracture stimulation design modeling. Determining Brittleness and its effects on stimulation design.

CONTENTS: Gas and oil shale plays are the fastest growing segment in E&P operations these days both in the US and around the world. These plays, uneconomic just a decade ago, are now accounting for an increasing percentage of our reserve base. It's not that the rocks have changed, but rather horizontal drilling and hydraulic fracturing have allowed for hydrocarbons trapped in these rocks to be extracted as never before. Microseismic monitoring has become an important facilitator to the development of shale fields. As many as 5% of the hydraulic fracture treatments performed in the US are now monitored, with some operators opting to monitor every well