

Fundamentals of Reservoir Simulation

0.8 CEUs (Continuing Education Units) awarded for this 1-day course.

Instructors

Grant Robertson, Anadarko Petroleum Corp.
Robert Gochmour, BP America Inc.

Intended Audience

This course is intended for those who have had little exposure to this technology and need a "quick start" on the learning curve. New college hires will benefit especially.

Description

The purpose of this seminar is to introduce the fundamental concepts and elements of reservoir simulation. This is an overview of simulation technology, taught from a physical perspective. There are no equations used in this course. Upon completion, participants will understand the basics such as why and how a model is built, data sources, how wells are modeled, and what a company is looking for in a reservoir simulation study. The various phases (from model building through prediction) and types (single-well, sector, full-field) of models will be discussed. This is not intended to be a hands-on course. This will be very fast-paced for those who want an overview of simulation types before getting involved in more in-depth study or practice.

Topics Covered

- ◆ Theory of Numerical Simulation
- ◆ Planning a Simulation Study
- ◆ Data Acquisition and Analysis
- ◆ Fluid Properties
- ◆ Rock-Fluid Interaction Relationships
- ◆ Geologic Model Development
- ◆ Grid Construction
- ◆ Model Initialization
- ◆ Prepare Well History
- ◆ History Match
- ◆ Prediction Cases
- ◆ Review of Simulation Models

About the Instructors

Grant Robertson joined Anadarko Petroleum Corp. in March, 2001 as an advisor in the Reservoir Engineering Department. Previously, he was Coordinator for Integrated Studies at RyderScott Company LP, Petroleum Consultants. He also has worked in California, Saudi Arabia and Texas for both Chevron and BP. He worked for 18+ years in the technical centers of both organizations on reservoir studies, reservoir simulation research, and reservoir simulation schools and workshops. He has significant experience in reservoir engineering, production engineering, and well testing. He has a Ph.D. degree in Chemical Engineering from the California Institute of Technology.

Robert Gochmour is a consulting reservoir engineer for BP America, Inc., Reservoir Engineering Team. He has more than 26 years' oil and gas industry and technology experience. He has been associated with the research, development, and application of reservoir simulators, reservoir engineering, and production technology throughout his career. He has taught graduate petroleum engineering courses at the U. of Pittsburgh and West Virginia U. Additionally, he has taught more than 100 industry short courses. He

received a B.S. degree (1973), M.S. degree (1975) and PhD. degree (1976) in Petroleum and Natural Gas Engineering from Pennsylvania State University.