Formation Evaluation for Exploration and Development

About the Course

To obtain reservoir parameters for a hydrocarbon field, sufficient data is required to reach reliable figures for reservoir modeling, reserve estimation and reservoir simulation. Formation evaluation which is the process of interpreting a combination of log measurements is able to provide data needed for both economic analysis and production planning.

Why You Should Attend

After drilling a borehole there are several critical immediate questions that have to be answered in deciding to complete or to plug and abandon it:

- How is the quality of the reservoir rock?
- How much is the effective porosity?
- How is the permeability of the potential reservoir? Can it be predicted from log data?
- How much is the hydrocarbon saturation?
- Is hydrocarbon producible?
- How much, if any, water will be produced with hydrocarbon?
- How thick is the pay zone?
- How data/experience from a drilled borehole could be used in another borehole?
- How are the rock mechanical properties of the reservoir rock?

Formation Evaluation course answers most of the above questions by integrating wireline log data and appropriate algorithm for different conditions.

Course Agenda

Subsurface environment and reservoir rock and fluid properties

Borehole environment, and logging procedure

Log data QC, editing and caliper logs

Spontaneous potential (SP) logs, principles and applications

Gamma ray and spectral gamma ray,

Principles of sonic logging and applications

Density logging and litho-density, principles and applications

Neutron logging, principles and quantitative interpretation

Applications of combined density and neutron logging data

Resistivity logging and measurement principles

Electrical properties of reservoir rocks and Archie's relationships

Log interpretation procedure in clean formations

Log interpretation in shaly formations

Principles of nuclear magnetic resonance (NMR) logging

Dipmeter and Image logs and their interpretation

Rock mechanical properties from log data

Application of intelligent systems in well log analysis

Who Should Attend

This workshop is specially designed for professionals involved in exploration and development. These include:

• Geoscientist

• Geophysicist

• Petrophysicist

• Petroleum engineers

• Exploration engineers/ managers