



Petrophysical Evaluation

MODULE

About the Skill Module

This skill module is an introduction to Petrophysical Evaluation which integrates the concepts and data covered in the previous modules. The porosity and resistivity data are used in the saturation model to calculate oil and gas saturations. By integrating the available mudlog, core and open hole log data, the Petrophysicist determines net pay, net to gross, porosity, and hydrocarbon saturations. These are required inputs to the Geologic (Static) model used to calculate hydrocarbon volumes in the subsurface. Also, the petrophysical evaluation data including permeability is required input into the reservoir dynamic model that is used to plan development wells and facilities and optimize production of oil and gas reservoirs.

[See example online learning module](#)

Target Audience

Geoscientists and engineers with less than twelve months experience using petrophysical data, Ideal for other technical staff and non-technical staff (e.g., management, drilling operations, technical support staff, finance, legal, IT, supply chain management, and others) at all experience levels wanting a basic background in the petrophysics discipline. This skill module lays the foundation for effective communications between the Subsurface Team and everyone else in the E&P Industry including Service Company and Government employees.

You Will Learn

Participants will learn how to:

- How to perform a basic petrophysical evaluation that incorporates Gamma Ray, SP, porosity, and resistivity data
- About the borehole and formation environment and the parameters required for saturation determination
- About the Archie Equations and how to calculate water saturations in any interval of interest
- About the effect of clay minerals on formation resistivity
- About the shaly sand equations used to calculate saturations in shaly sands
- About how to conduct an integrated formation evaluation

Skill Module Content:

- What Is Petrophysical Evaluation?

- Understanding Reservoir Saturation
- Net Reservoir, Net Pay, and N/G
- Porosity and Quick-Look Petrophysics
- Resistivity, Archie, and Saturation Determination
- Petrophysical Evaluation Approach
- Saturation Models in Shaly Sands

Product Details

Categories: Upstream

Disciplines: Petrophysics

Levels: Basic

Product Type: Individual Skill Module

Format: On-Demand

Duration: 4 hours (approx.)

\$395.00