



## Direct Hydrocarbon Indicators and Amplitude vs. Offset

### MODULE

#### About the Skill Module

This skill module explains that the effect of hydrocarbons as a pore filling material in our seismic data is at the core of seismic interpretation. This skill module also includes a section on rock physics. Amplitude variation with offset is used to modify risk in hydrocarbon prospects. This skill module introduces the concept, process and application of the technology.

[See example Geophysics eLearning module](#)

#### Target Audience

Geoscientists, engineers, team leaders, geoscience technicians, asset managers, and anyone involved in using seismic data that needs to understand and use this data at a basic level or to communicate with others that use it

#### You Will Learn

You will learn how to:

- Explain the effect of hydrocarbons in the seismic data
- Detect hydrocarbons in the seismic data
- Describe rock physics
- Define amplitude variation with offset/angle (AVO/AVA)
- Make approximations to the Zoeppritz equations, including:
  - Aki-Richards equation
  - Shuey's equation
- Identify the Rutherford and Williams classification
- Describe slope, intercept, and the fluid line
- Describe the methods for prestack inversion, including:
  - Simultaneous Inversion
  - Elastic Impedance and Extended Elastic Impedance
- Lambda Rho and Mu Rho

#### Product Details

Categories: Upstream

Disciplines: Geophysics

Levels: Basic

Product Type: Individual Skill Module

Format: On-Demand

Duration: 4 hours (approx.)

**\$395.00**