



Seismic Acquisition, Processing, and Migration

MODULE

About the Skill Module

This skill module explains the seismic data acquisition process and components for marine and land data. Also included is a comparison of the costs of seismic data acquisition for marine and land data. It also explains the concept of seismic processing flow and deconvolution. The skill module also explains what the processors do to produce the seismic image. Finally, we discuss the process of forming the seismic image by migration. There are several ways to migrate the data, including post-stack, pre-stack, time, and depth migration. For this skill module, Kirchhoff migration is used as a word picture for the process of allowing constructive and destructive interference to build the migrated image. Other methods will be discussed with their pros and cons.

[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:

- Describe the marine configuration for a 3D survey including:
 - Components used for data acquisition
 - Arrays to attenuate noise
 - Bin gathering as a CMP assemblage of reflections
- Describe the land configuration for a 3D survey including bin gathering for a land 3D survey
- Compare the costs of 2D and 3D surveys
- Describe processing flow
- Explain the concept of deconvolution
- Identify what the processors do to produce the seismic image
- Identify migrated displays
- Describe the matrix of "icons" explaining migration in time, depth, pre-stack, and post-stack
- Explain the relevance of each seismic migration domain
- Identify the "best" seismic migration domain

Product Details

Categories: Upstream

Disciplines: Geophysics

Levels: Basic

Product Type: Individual Skill Module

Format: On-Demand

Duration: 8.5 hours (approx.)

\$395.00