



## Structural Interpretation Techniques and Concepts

### MODULE

#### About the Skill Module

This skill module introduces structural interpretation as the backbone for evaluating hydrocarbon resources and modeling basins. The skill module examines structural interpretation as fundamental to aspects of development including locating and scoping traps to tracking fluid-flow pathways for hydrocarbon migration through sequential restorations.

The skill module begins with consideration of plate tectonic habitats or structural families including their distinguishing characteristics then examines key techniques in structural interpretation and how they are effectively applied to different habitats, structures, and cases. The skill module provides detailed studies of faults and common structural types, including the interpretive methods allied with specific types and cases.

The focus then turns to interpretive methods related to balanced cross-sections and restorations. The skill module concludes with a brief consideration of seismic methods and data for structural interpretation.

By completing this skill module, learners will be able to recognize the sound application of interpretive methods to specific structures and features and identify areas where an approach or interpretation may miss the mark or merit reevaluation.



[See example Geology eLearning module](#)

### **Target Audience**

Exploration geologists, geophysicists, engineers, and geoscience managers

### **You Will Learn**

Participants will learn how to:

- Explore the concept of the “Structural Family”
- Engage three types of plate tectonic habitats: divergent boundaries, convergent boundaries and transform boundaries or margins
- Examine the faults and other characteristics associated with each habitat
- Identify key terms and concepts including structural inheritance and kinematic compatibility

- Explore fault-related folds and how they are interpreted
- Examine other fold types and their interpretation
- Become aware of the risks of vertical exaggeration in data and know how to correct it
- Explore the significance of elevation baselines in seismic interpretation
- Clarify the relationships between stress, strain, and kinematic compatibility
- Distinguish between apparent and true offset
- Review key terminology and definitions regarding faults, including fault types and kinematics, and fault displacement components
- Practice measuring throw, heave, and net slip, and examine the relationships between them for different bed dips
- Examine fault polygons as quantitative representations of fault surfaces
- Identify fault strike components from maps
- Learn how to infer faults using different types of available data
- Identify the characteristics of structures in extension, contraction, and strike-slip environments
- Examine interpretive cases from diverse structures
- Better recognize interpretive challenges and opportunities
- Recognize why restoration is performed in structural interpretation
- Examine key the concepts of balance and admissibility in cross-sections
- Recognize the characteristics that make cross-sections viable or valid
- Explore different kinematic models for restoration and when and why they apply

## Product Details

Categories: [Upstream](#)

Disciplines: [Geology](#)

Levels: [Basic](#)

Product Type: Individual Skill Module

Format: On-Demand

Duration: 4.5 hours (approx.)

**\$395.00**