

# PRE-STACK PRO FOR INTERPRETERS

## 2-DAY COURSE

### OVERVIEW

This course is designed for seismic interpreters already familiar with data loading and basic functionality in Pre-Stack Pro. It teaches the benefits of pre-stack interpretation, optimization of data for specific targets and tasks, and how to quantify the improvements in Pre-Stack Pro.

Using a training dataset, participants will go through horizon interpretation and surface construction in Pre-Stack Pro and how to create and interpret example seismic attributes. The use of AVO/AVA and the theory supporting it will be explained in a short lecture format. Attendees will learn how to use cross-plot tools, create lithofacies, and create inversion products for quantitative seismic interpretation.

### DAY 1

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#### PRE-STACK DATA REVIEW AND QC

View and assess gather quality at different locations in different and integrated views.

Learn about what might be affecting your data, and what can be removed or improved.

Run Sharp Reflections' new Health Check routines on raw gather data and learn how to interpret the results.

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#### DATA CONDITIONING

Load and run a conditioning workflow on the raw gather data.

Learn about the different processing options available in Pre-Stack Pro.

Use Health Check routines to quantify improvements in gather quality.

Use pre-stack interpretation to design mutes and create the optimum stacks for interpretation.

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#### HORIZON INTERPRETATION IN PRE-STACK PRO

Auto-track a new horizon on optimally stacked seismic data.

Examine the effects of different auto-tracking parameters.

Create a completed surface using the horizon tools in Pre-Stack Pro.

Generate seismic attribute maps using the conditioned data and completed surface.

## DAY 2

## AMPLITUDE ANALYSIS IN PRE-STACK PRO

Learn the use of AVO/AVA theory to link geology and reservoir fluid to seismic data.

Load synthetic gathers from SEG-Y data and compare to real data.

Use AVA models to understand what will be observed on your pre-stack data.

## HORIZON INTERPRETATION ON PRE-STACK DATA

Extend horizon interpretation into the pre-stack domain.

Use pre-stack data to generate QI deliverables.

Compare the use of cube and map format intercept and gradient data.

## SEISMIC ATTRIBUTES AND INVERSIONS FOR QUANTITATIVE INTERPRETATION

Cross-plot seismic attributes and well log data to define lithofacies and apply to seismic attribute maps.

Use well picks, log cut-offs and polygon selections to define data sub-sets.

Analyze the results and differences between HC and brine sands and between real and synthetic datasets.

Advanced attributes – overview of inversions, theory and practical use.

Define a colored inversion wavelet operator and create the inverted dataset.

Create chi-angle volumes and select the optimum angles for distinguishing lithologies and fluids interactively.

## OTHER INFORMATION

## DURATION

2 Days  
9:00 – 16:00

## LOCATION

Sharp Reflections AS  
iPark  
Professor Olav Hanssens vei 7  
4021 Stavanger

## COST

NOK 10.500,-