

Pre-Stack Inversion

5 days
Overview

PRESTAC-EN-P

LEVEL

Knowledge

PURPOSE

This training provides a practical understanding and know-how to perform Pre-stack Seismic Inversion on Seismic data. More common workflows will be explained and tested, as well as inversion results QC's. Knowledge about Seismic Inversion algorithms using pre-stack data will be delivered along the training.

LEARNING OBJECTIVES

Upon completion of the course, participants will be able to:

- understand the purpose of pre-stack seismic inversion,
- how to prepare the data before performing pre-stack seismic inversion,
- perform a seismic inversion and QC the results,
- interpret the results,
- supervise a seismic Inversion study.

WAYS AND MEANS

Interactive presentations, exercises and document analysis.

80% of training duration is dedicated to workshop on PC, using a seismic interpretation software tool from the industry. Real datasets will be used for the workshop.

PREREQUISITES

Degree or experience in geophysics, with basic seismic background knowledge.

Agenda

WHAT IS SEISMIC INVERSION? PRINCIPLES

SEISMIC IMPEDANCES (P & S), POISSON & LAME PARAMETERS

DATA FOR SEISMIC INVERSION

SEISMIC SPECTRUM & RESOLUTION

PRE-STACK INVERSION TYPES & ALGORITHMS

WHY, WHERE & WHEN USING PRE-STACK SEISMIC INVERSION?

WORKSHOP USING REAL DATA CASE STUDY

Data requirements, QC and preparation for seismic Inversion.

Preliminary feasibility study.

Wavelet generation.

Well-to-seismic calibration.

Initial modeling.

Inversion parameters and final inversion.

QC, validation and deliverables.

Clues for Interpretation of pre-stack inversion.

CONCLUSIONS & WRAP-UP