

CARBONATE SEISMIC INTERPRETATION

TRAINING COURSE
(3 DAYS)

Course Description

Carbonate sequences are extremely complex to characterize in terms of reservoir geometries and properties. Carbonate sequences are developed under the control not only of physical but also biological parameters and results in a variety of geometries that vary greatly in 3D. These intervals are also strongly affected by shallow to deep burial diagenetic process that modify the reservoir properties of the different facies and impact on the geometries and distribution of reservoir facies. Finally carbonate sequences are also often affected by fault and fracturing that strongly control the circulation of fluids within these sequences. Seismic can be often an excellent tool to map the different depositional settings and to understand the distribution, vertical and lateral variability of good reservoir intervals. Seismic interpretation in carbonate setting should combine the geophysical characteristics of the sequence with key concepts related to understanding of depositional facies belt, diagenetic overprinting and structural characteristics associated to carbonate rocks. This course introduces to the complexity associated to carbonate sequences and the best way to characterize them using 2D and 3D seismic. Several case studies from around the world will be also shown.

List of contents:

1. Carbonate depositional environment characterization
2. Diagenesis & fracturing in carbonates
3. Reservoir Facies in Carbonate units
4. Seismic imaging of carbonate sequences: what can we see and what we cannot see
5. Seismic image quality and impact on seismic interpretation: can we improve seismic quality?
6. Seismic Interpretation of carbonate sequences using 2D and 3D seismic: approach, differences and key principles
7. Seismic interpretation of carbonate sequences in different tectonic settings: differences and challenges
8. Seismic attributes to characterize carbonate reservoir facies & fracturing: selection of the most appropriate
9. Seismic forward modelling in carbonates: a prediction tool
10. Carbonate Reservoir characterization workflows: how to integrate all the data for a full picture of the reservoir

In each module various examples from around the world and from different tectonic settings and different carbonate depositional settings will be shown. Most of the modules will have also real case studies with 2D and 3D seismic to better explain and visualize the key concepts.

Participants

The course is designed for petroleum professionals including geophysicists, geologists, geoscientists, geomodellers in exploration or appraisal/development projects.

Instructors

The course will be run by Raffaele Di Cuia, an experience geoscientist part of the GEPlan Consulting team. Raffaele is geoscientist with more than 20 years' experience in the oil industry. He has worked and consulted for major to small independent oil companies in Africa, Europe, Middle East and the Americas. His main expertise is the related to the exploration and characterization of carbonate and fractured reservoirs.

About GEPlan Consulting

GEPlan is a consulting firm based in Italy that provides innovative and integrated geoscience consulting services for exploration and reservoir characterization activities to international E&P companies. GEPlan also offer a series of training courses, field trips and seminars for petroleum industry professionals. Since 2004 we have run more than 60 courses & field trips with more than 800 participants working for international and national oil companies. Our training courses are run with innovative techniques of teaching and communication with original visual aids and materials. We have run field courses in Italy, France, Spain and Middle East with participants coming from all over the world.

for more information
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