

FAULTS, FRACTURES AND KARSTS NETWORKS IN DIFFERENT CARBONATE DEPOSITIONAL SETTINGS: IMPACT ON PERMEABILITY DISTRIBUTION

**FIELD TRIP
(4 DAYS)**

Course Description

The field trip offers the opportunity to observe, in world-class outcrops, the impact of fracture, fault and karst related networks developed in different carbonate depositional settings on permeability distribution. The field trip focuses on the description of the main factors impacting the fluid distribution and circulation in fractured carbonate sequences/reservoirs.

The course will focus on the main tools and approaches used to understand the geometries and the properties of fault and fractures and their impact on reservoir performances.

Particular emphasis will be given to the understanding of the uncertainties and impact of different data and input for the modelling of faults, fractures and karst geometries at reservoir scale.

This field trip gives participants a chance to look at different carbonate depositional settings ranging from internal platform/lagoon to platform margin and to slope and basinal. In each setting it is possible to observe how fault and fracture developed and what are the main controlling factors at different scales.

By using the outcrops of the Apulian Carbonates and subsurface data from equivalent reservoirs of southern Italy the field trip will cover the following topics:

- understand the 3D organisation of facies (depositional model and sequence stratigraphic framework) from large (regional) to meso- (reservoir) scale;
- understand the hierarchy, distribution and organisation of the fault and fracture networks and their relationships with tectonic structures in different tectonic settings;
- verify and characterize the relationships between sedimentary facies and fracture distribution in different structural conditions;
- observe the characteristics of a multistage karst network and the 3D distribution to understand impact on reservoir performances.

Itinerary

Day 1 -The Apulian Carbonates in Altamura: fracture patterns and characteristics in a plan view.

Day 2 -The Apulian Carbonates in Gioia del Colle: fracture patterns and characteristics in a vertical view. Tight vs porous carbonates in the Matera High: impact on permeability and connectivity of carbonate reservoirs.

Day 3 - The paleokarst outcrops of Apricena. Damage zone along a regional fault along the Mattinata fault in the Gargano area.

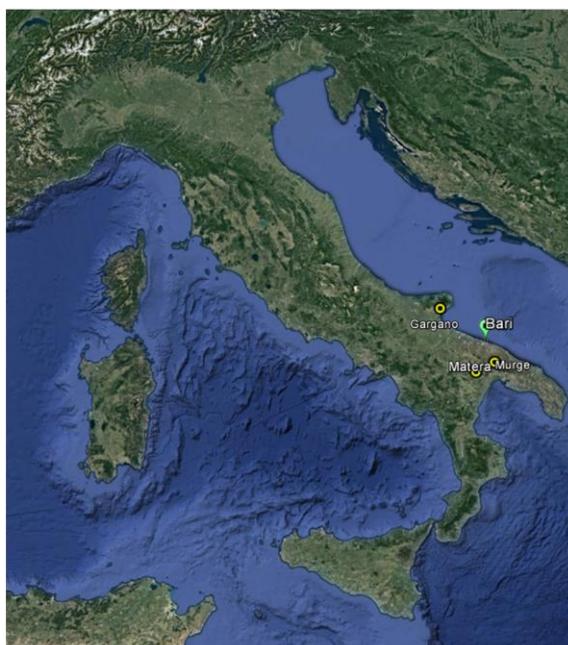
Day 4 - The margin and slope of the Apulian Platform: fracture patterns and sedimentology

Participants

The course is designed for petroleum and production geologists, geomodellers, reservoir engineers and geophysicists working for the exploration, appraisal and development of fractured reservoirs. Ideally, the components of a subsurface team would greatly benefit from participating together. The minimum number of participants to run the course is 5.

Location

The course is run in Southern Italy and starts and ends at Bari International Airport



for more information
contact:

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