

Stratigraphy of the Arabian Plate (G129)



Tutor(s)

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Overview

This course explores the palaeogeographic, tectonic and sedimentological development of the Arabian Plate and is divided into seven modules: Cenozoic, Upper Cretaceous, Middle Cretaceous, Lower Cretaceous, Jurassic, Permo-Triassic, Palaeozoic. The individual course modules aim to provide participants with a more regional understanding of their own acreage, which is often critical in development and production settings.

Duration and Logistics

The course can be presented in the classroom or online as a single event, covering all seven stratigraphic modules, or clients can choose the length of course depending on how many modules they require (half-day teaching time per module).

Classroom version: A 3.5-day classroom course comprising a mix of lectures and case studies covering all 7 modules. The manual will be provided in digital format.

Virtual version: Seven, 3.5-hour interactive online sessions presented over 3.5 days. A digital manual will be distributed to participants before the course.

Level and Audience

Fundamental. This course is intended for exploration geoscientists who want to rapidly improve their knowledge of these complex systems.

Objectives

You will learn to:

1. Understand plate evolution at a regional scale.
2. Appreciate the tectonic controls on sedimentation and stratigraphy.
3. Analyse the wide range of proven carbonate reservoirs on a single structural template.
4. Define factors associated with good structural and stratigraphic traps.
5. Build an understanding of how carbonate source rock systems form.
6. Compare and contrast climate controls on different carbonate systems tracts.
7. Illustrate the interaction/interplay of clastic and carbonate depositional systems.

Course Content

Module 1: Cenozoic

- Asmari and Kirkuk Group reservoirs; development of a world-class dual porosity system in a compressive setting.

Module 2: Upper Cretaceous

- Fractured basinal carbonate reservoirs and matrix dominated pinnacle reservoirs deposited in a compressive setting.

Module 3: Middle Cretaceous

- Supergiant 'Mishrif' reservoir system, Burgan-Nahr Umr clastic reservoirs.
- Source rock systems in intrashelf basin settings.

Module 4: Lower Cretaceous

- Important microporous reservoirs in the Thamama Group and Yamama-Fahliyan stratigraphy; Zubair sandstone reservoirs.
- Source rock systems in intrashelf basin settings.

Module 5: Jurassic

- Arab reservoirs; classic cyclic reservoir-seal pairs and supergiant accumulations.
- World-class source rock systems in intrashelf basin settings.

Module 6: Permo-Triassic

- Light oil play systems in the Triassic, and Khuff gas reservoirs.
- Depositional features of the restricted carbonate platforms.

Module 7: Palaeozoic

- Dry gas opportunities and oil accumulations related to the Silurian source rock system.