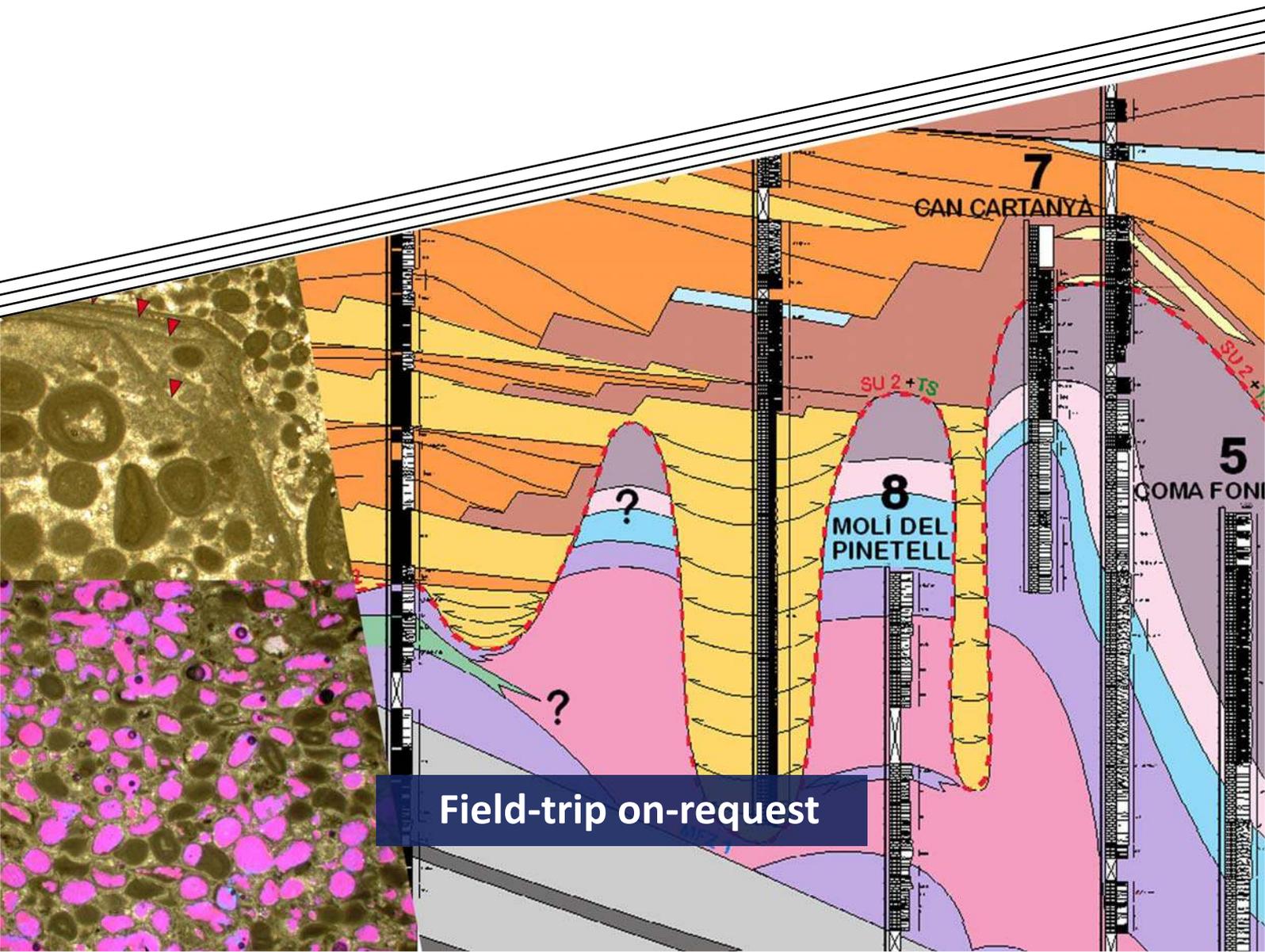


ARCHITECTURE OF MICROBIAL-DOMINATED CARBONATE RAMPS

Depositional architecture
of marine microbialites
in rift tectonic settings



Field-trip on-request

Summary

The fieldtrip to the Middle Triassic of the Catalan Basin will examine several aspects of microbialite reservoirs including their sequence stratigraphic context, tectonic settings, composition, size and geometries.

The depositional setting of microbialite occurrences and the role of accommodation and subsidence in their distribution will be discussed and compared with similar presalt locations (Messinian, Mediterranean Basin, marine settings; Cretaceous, Campos and Santos Basin, Presalt lakes).

The Middle Triassic microbialites of the Catalan Basin exhibit spectacular cross-section views offering an opportunity to better understand the outcrop and seismic-scale geometries, and the role of rifting on sedimentary architecture of these potential hydrocarbon carbonate reservoirs.

Instructor: Ramon Mercedes-Martín, PhD

Location: Tarragona, the course starts and ends in Barcelona Airport

Cost: Ask for a quote today!

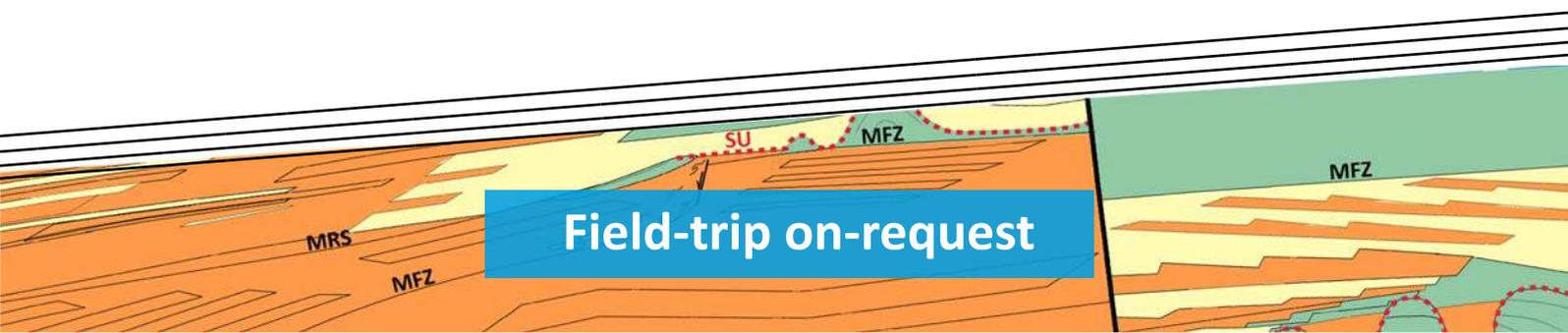
Dates: 3 full days

Attendees: maximum 5 participants

Level: Basic/ Skill

Outcomes: 3 days fieldtrip and 2h daily classroom (printed guide included for each participant)

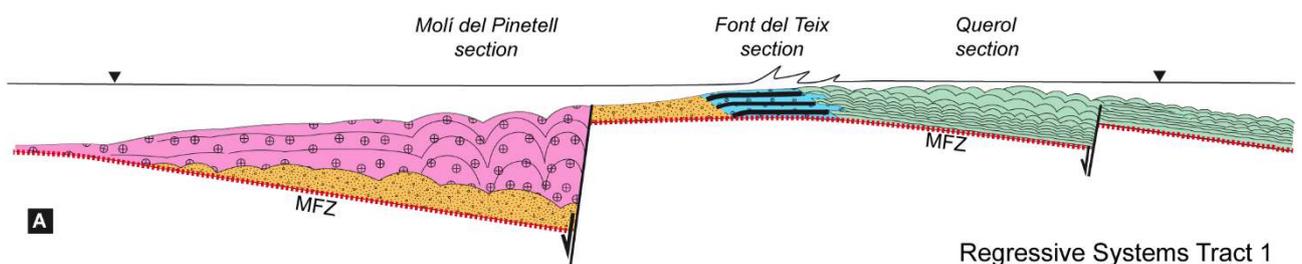
Physical demand: easy accesible route and safe hike



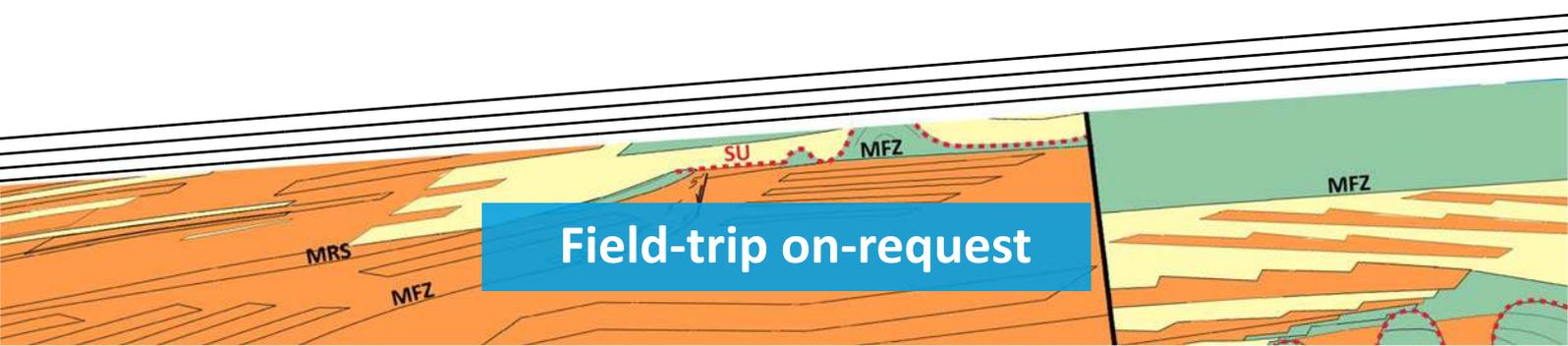
Course outline

Objectives:

- * Understand facies architecture of microbial-dominated carbonate ramps developed during rapid syn-rift pulses
- * Recognise facies stacking patterns, sequence stratigraphic surfaces and geometry of sedimentary bodies at outcrop and seismic scale to better constrain the stratigraphic evolution of these ramps
- * Become familiar with different types of carbonate facies, sedimentary geometries, stratal terminations and broad depositional environments
- * Understand the heterogeneity of microbial carbonate facies and the controls on their occurrence and growth



Spectacular seismic-scale architectures of the microbial-dominated carbonate ramps. Depositional model for the marine microbial carbonate deposits formed during rapid pulse of syn-rift subsidence (Middle Triassic Catalan Basin, Spain)



Daily programme

Day 1

Afternoon: Meeting upon arrival to Barcelona airport. Head to Santes Creus (Tarragona). Ice-breaker and Introduction.

Introduction to the Middle Triassic of the Catalan Basin (Spain).

Sedimentary architecture of the Middle Triassic microbial-dominated carbonate ramps of the Catalan Basin.

Microbial carbonates: the biotically induced carbonate deposits

Spend overnight at Santes Creus

Day 2

Morning/ Afternoon: Explore the Gaià domain (inner ramp depositional systems). 5 stops to examine the diversity of muddy, grainy, and microbial facies associations in peritidal settings (transgressive and regressive stages). *Recognise facies heterogeneities, depositional geometries, stacking patterns, micro- and macrofeatures of the muddy facies, oolitic shoals, stromatolite bioherms, and ooidal-muddy laminites.*

Lunch in the field.

Evening: Head hotel and open Discussion and summary of take-away ideas.

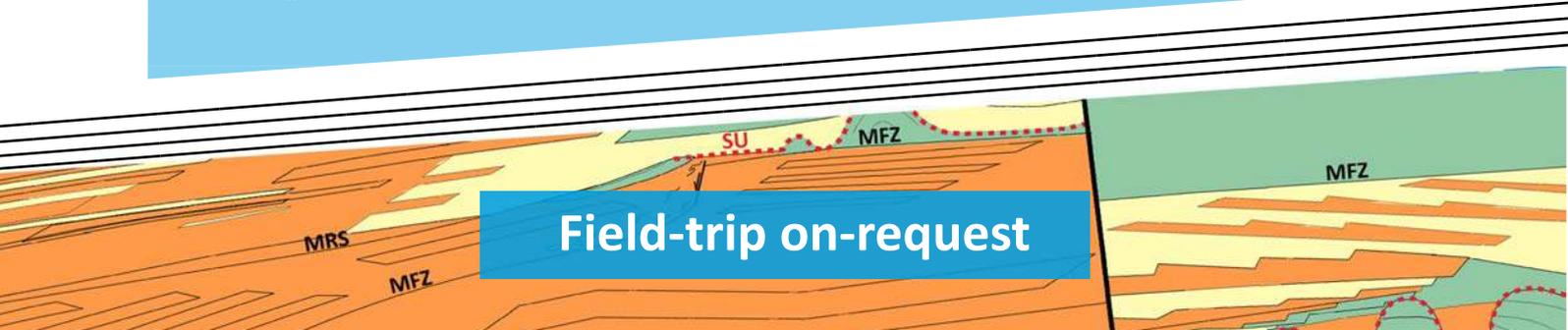
Day 3

Morning/ Afternoon: Explore the Prades domain (middle ramp depositional systems). 4 stops to recognise the geometry, stratal terminations and architecture of the seismic-scale thrombolite biostromes and bioherms.

Outcrop scale thrombolitic geometries, textures and the associated facies heterogeneity. Identify attributes of paleokarst surfaces. Identify peritidal facies variability and cyclicity, and also the nature of the fine-grained anoxic facies. Paleoenvironmental and sedimentological implications for reservoir geology.

Lunch in a traditional Catalan restaurant.

Evening: Head to Barcelona airport.



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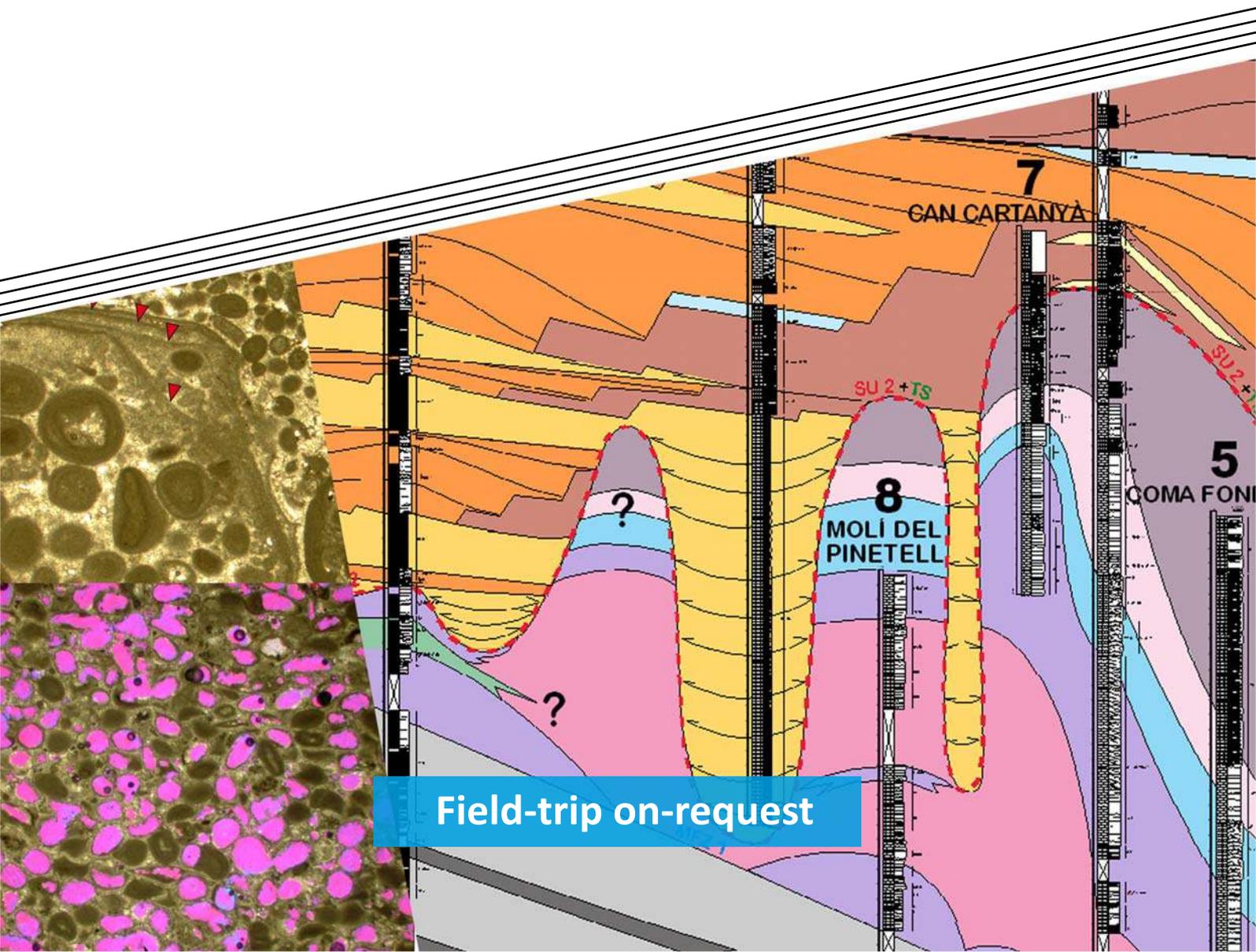
Book this field-trip by e-mail

Feel free to request more information (by email or phone):

Technical content and logistics:

info@ramonmercedes.com

+34-678 06 27 78



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