

## W006: Depositional Systems of the South Atlantic Pre-Salt: refining models for exploration and development

Format and Duration  
Classroom - 2 Days

Instructor(s): Paul Wright

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### Summary

The workshop provides an overview of the current understanding of the complex pre-salt carbonate reservoirs of the South Atlantic, including offshore Brazil and West Africa. Following an introduction to lacustrine depositional systems and the range of carbonates found in rift basins, the different reservoir types (coquinas and 'microbialites') in the South Atlantic basins are reviewed. Two current contrasting models for the 'microbialite' reservoirs are critically assessed, from the seismic to core-scales. Practical guides to understanding the highly unusual rock types in these reservoirs are provided.

### Training Method

The workshop will be taught by Paul Wright (PWCG). Emphasis will be placed on the depositional systems and how different models impact upon exploration and development strategies, and how to evaluate these models. Exercises will provide methodologies for assessing which models are applicable, with a focus on understanding the highly unusual rock fabrics and porosity evolution in these limestones.

### Who Should Attend

The workshop is designed to appeal to all geoscientists involved in the subsurface analysis of the pre-salt in the South Atlantic.

### Prerequisites and Linking Courses

There are no prerequisites however a general understanding of carbonate geology would be favourable.

### Course Content

#### Day 1

- Lacustrine depositional systems: how and why they differ from marine systems
- Carbonates in non-marine rift systems
- Microbialites in lacustrine systems and reservoir case study
- Brazilian margin Cretaceous Pre-Salt carbonates 1: Coquinas
- Brazilian margin Cretaceous Pre-Salt carbonates 2: What are the 'microbialite' reservoirs and why are they so unusual?

#### Day 2

- Brazilian margin Cretaceous Pre-Salt carbonates 3: Evaluating the different 'microbialite' depositional models. Seismic data provided by Spectrum
- Brazilian margin Cretaceous Pre-Salt carbonates 4: Diagenesis and porosity generation in the 'microbialites'
- Brazilian margin Cretaceous Pre-Salt carbonates 5: A practical guide to studying the limestones (exercise)
- West African Cretaceous Pre-Salt carbonates
- Synthesis: Brazil versus West Africa pre-salt play concepts

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