

## Stefan Doublet

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### Biography

Stefan Doublet received his B.S. degree in geology from Oxford Brookes University, Oxford, United Kingdom, and both his M.S. degree and doctoral degree in carbonate sedimentology from University of Burgundy in Dijon, France.

During his Ph.D. he developed skills related to the multidisciplinary investigation of nonmarine rift basins and investigated the interactions between tectonics and climates in the sedimentary filling of the Cameros Basin, Spain, providing a record of climate changes of the subtropical zone in Europe during the Early Cretaceous.

After a year spent as a postdoctoral fellow at University of Provence in Marseilles, France, where he studied field analogs of Middle East carbonate reservoirs, he joined Beicip-Franlab as a sedimentologist in 2007. His consultancy interests include carbonate and siliciclastic sedimentology, sequence and seismic stratigraphy, and structural geology applied to exploration geology of sedimentary basins.

At present time, Stefan Doublet is leader of the Stratigraphy and Petrography Team at Beicip-Franlab, and is mostly involved as senior geologist in exploration projects for oil and gas companies in the Middle East and South America.

### Presentation Abstract: Late Jurassic Carbonate Play Fairway

#### Analysis

The 1999 major gas discovery at Deep Panuke Field proved the existence of a petroleum system in the reefal belt of the Late Jurassic Baccaro carbonates. Although recent studies have focused on the play, no Play Fairway Analysis approach integrating sedimentology, geophysics and modeling was attempted at the scale of the Scotian margin.

The objective of the present work is to integrate factors controlling potential hydrocarbon accumulations and geological uncertainties into a play fairway modeling in order to simulate the charge of potential reservoirs along the reefal bank. The investigation is carried out from the Panuke Segment to the La Have Platform over 600 km. The integration of the available geological and geophysical data aimed at gaining a better understanding of reservoir characteristics combining depositional models, diagenesis, petrophysics, sequence and seismic stratigraphy, seismic interpretation and attribute analysis.

The Panuke Segment contains favorable elements of the petroleum system, with fair source rocks in a mature stage, hydrocarbon migration up along main layer inclinations of faults into reefal margin and back-reef oolitic reservoirs, and local seals by more compact sponge-reef to low permeability siliciclastics. Another unproved play was detected along the La Have Platform. It contains favorable elements of the petroleum system, with potential source rocks in a mature stage, plausible fairway along the margin, good reservoir thicknesses and fair seals in Cretaceous and Tertiary sediments.

Combination traps were identified along the Mohawk Ridge, the Mohican Sub-Basin and around the Deep Panuke field, constituting prospective areas to be investigated in the future.