

*Over the coming years many new wells are planned enabling further refinement of current models.*

## 2) Carbonate platform and platform-collapse facies in the Mesozoic Tethys

### Abstract

*During the early Mesozoic the Tethyan margins of southern Europe were bordered by extensive Bahamian-type carbonates predominantly composed of lime-mud. These, often cyclically arranged, carbonate shelf successions are often more than 1 km thick and rest on continental red beds of early Triassic age. The minor cycles resulted from regressive-transgressive episodes affecting very shallow waters and associated structures include stromatolites and fenestral fabrics locally associated with palaeokarstic surfaces. During the late Lower Jurassic, and through a wide belt embracing N. Africa, S. and C. Europe, and beyond, shallow-water platform facies are suddenly replaced by pelagic sequences of two contrasting types: a) thick limestone-marl successions that formed in pelagic and hemi-pelagic basins (Fleckenkalk facies) and b) condensed red modular limestones (Ammonitico Rosso) that formed over submarine highs (seamounts). Surfaces separating pelagic sequences from platform ones are usually sharp, corroded, penetrated by neptunian dykes and sills and coated in crusts of Fe-Mn oxide. Condensed seamount facies locally exhibit deep-water sand waves composed of Bositra (a bivalve), or crinoidal debris that accumulated as the seamount submerged.*

*Pelagic basinal sequences generally accumulated below the aragonite compensation depth and contain only calcitic fauna and ammonite aptychi. Ammonitico Rosso facies occur periodically through the Jurassic but are never well represented after the start of the Cretaceous when true chalks appear. Chalky limestones with abundant coccoliths (the Maiolica) record the evolutionary burst in these planktonic organisms.*

*The more-or-less simultaneous collapse of Tethyan carbonate platforms in the late Lower Jurassic records the westward extension of the Tethys and initial opening of the Central Atlantic. Collapse of platforms marks the subsidence of newly generated continental margins adjacent to the new ocean system. The Central Atlantic is thus a remnant of the old Tethys Ocean.*

### Report

Dr. Bruce Sellwood, of the University of Reading, England, was in Malaysia for 6 weeks as a Visiting Professor of Petroleum Geology at the University of Malaya. He was involved in the Petroleum Geology course for the undergraduates as well as advising on research in Petroleum Geology. He took time off his heavy schedule to present two talks to the GSM on the 11th and 12th December 1985 at the Geology Department, University of Malaya.

Azhar Hj. Husin

\*\*\*\*\*