

PETROLEUM SYSTEMS ON THE SOUTH-EAST MARGIN OF VIETNAM

PHAN TRUNG DIEN, NGUYEN HUY QUY - Vietnam Petroleum Institute, Hanoi, Vietnam

The South-East continental margin of Vietnam has become well known in Southeast Asia with CuuLong and NamConSon Basins, because of their rich Oligocene lacustrine source rock, Tertiary clastic and carbonate reservoirs and unusual Late-Mesozoic fractured plutonic-volcanic basement reservoir.

The coherent plutonic basement was formed by continental collision after closure of Tethys ocean. The plutonic-volcanic basement complex was affected by several Tertiary fault phases, causing it to become a fractured oil-bearing reservoir. The massive movement of blocks during the rifting phase brought about different levels of subsidence and displacement of basement massifs and the formation of fracture in horst block and basement tectonic nose. They led to formation of basement high traps.

The graben structures caused by the Oligocene rifting. The Oligocene sediments are composed of lacustrine and tidal-lagoonal fine clastics. Some of them are good reservoir targets. Other sequences are characterised by tidal-lacustrine shales. They are both source rocks and effective caprocks.

Post-rift basin fill is characterised by various sediments. The Miocene sediments are both clastic and build-up carbonate reservoirs. The Miocene clastic reservoirs are largely distributed on all CuuLong basin and the west part of NamConSon Basin. The Miocene carbonate reservoir is distributed on the East part of the NamConSon Basin. The association of the Mesozoic fractured plutonic basement high, Oligocene, and Miocene reservoirs and Oligocene-Miocene source rocks with Oligocene-Miocene and Pliocene seal sequences is typical character for all Tertiary basins on the South-East margin of Vietnam.