

**Geology and development of the Pulai Field, Offshore Peninsular Malaysia
by Yew Chee Cheong**

The Pulai Field is the first developed commercial oil field in Peninsular Malaysia and is currently producing low-sulphur 45° API oil at a rate of about 35,000 barrels a day. This small, faulted anticlinal feature was explored and delineated by four exploration wells. A 24

conductor platform was installed in 1977 and development drilling was completed in June 1979.

The reservoir rocks in Pulai consist mainly of stacked braided stream, point bar and stream mouth bar deposits which coalesce laterally to form continuous sandstone units. There are three major reservoir sands in the field and in these sands, the oil columns are thin and the oil is reservoired in rim accumulations in the individual sandstone units. Pre-development reservoir engineering studies indicated that oil depletion in the main reservoir sands will be by combination drive and the Pulai drainage model requires that platform wells intersect the objective sand tops fifty to sixty feet above the oil-water contact to maximise ultimate recovery. Due to the shallow depth of the reservoirs, a maximum angle of 60° has been required in some wells to reach the objective sands at the desired structural level. Unexpected stratigraphic variations, limitations in the accuracy of currently available deviation survey tools to more precisely define wellbore trajectories, steep structural dips, structural uncertainty especially in the crestal area along with reservoir engineering requirement to intersect sand stops at specific structural depths have combined to complicate the development of Pulai.
