

Paper 12**Integrated reservoir characterisation Cakerawala Field-Block
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The Cakerawala Field is located in Block A-18, Malaysia-Thailand Joint Development Area (MTJDA). This is offshore, in the South China Sea, in the North Malay Basin/South

Gulf of Thailand. It is operated by Carigali-Triton Operating Company Sdn. Bhd. (CTOC) on behalf of its Shareholders Petronas Carigali (JDA) Sdn. Bhd. and Triton Energy Limited, Contractors to the Malaysia-Thailand Joint Authority (MTJA). The Production Sharing Contract was signed on the 21st April 1994.

The Cakerawala Field was discovered by Well Pilong-1. This was drilled by Esso in 1971. The Field was confirmed by CTOC Appraisal Well Cakerawala-1A/1A-ST in 1995. CTOC drilled Field Delineation Wells Cakerawala East-1, Cakerawala-2 and -3 in 1996. The seismic database comprises a 2 km x 0.5 km grid of 1994 2D (c. 6,000 line km) and a 1995 3D survey (630 sq. km).

The petroleum system of the Cakerawala Field comprises stacked, Mid-Late Miocene clastic reservoirs, trapped in a fault/dip closed structure, sealed and charged intra-formationally with lean gas/condensate and oil. The pay is contained in Shallow, Intermediate and Deep Reservoirs. There are two principal gas pools. These occur in the Shallow Reservoirs.

Integrated reservoir characterisation of the two principal gas pools has been undertaken. The hydrocarbon pore volume parameters (net pay, porosity, water saturation, hydrocarbon feet, bulk volume gas) for each reservoir were determined through petrophysical evaluation of the Field wells. These were then calibrated to selected seismic reflectivity attributes and acoustic impedance. Geostatistical modelling techniques were then employed to generate reservoir property maps. These have been used to refine the pool model, estimate reserves and plan their development.
