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## Geology and Production History of Offshore Northwest Palawan, Philippines

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The area of study is the continental shelf and rise off northwest Palawan and part of the southeastern margin of the South China Sea spreading center. A pre-Tertiary continental basement complex is separated from the accreted oceanic crust, outcropping on southern Palawan, by the Ulugan Bay fault, which is one of several north-south-trending strike-slip fault zones recognized in the area.

A geologic section consisting, in the lower part, of limestones, volcanics and fine-grained clastics, ranging in age from pre-Tertiary to lower Oligocene, is encountered off northwest Palawan. This is unconformably overlain by the

Nido Limestone and deep-marine shales of the Pagasa Formation (upper Oligocene to middle Miocene). The contact with the coarse clastic Matinloc Formation is an unconformity recognized on a regional scale and related to collision of the drifting margin with the remainder of the Philippine archipelago. The sequence is topped by the Carcar Limestone, described from many areas in the Philippines.

A total of 30 wells have been drilled so far: 12 were dry, 10 were discoveries, 7 of which have been declared commercial, and 7 were delineation wells. Occurrence of hydrocarbons had

been restricted to reef-related reservoirs of the Nido Limestone, until the recent discovery of oil in sandstone reservoirs in Galoc 1 heralded a new chapter in the Philippines search for hydrocarbons.

Evaluation of the production performance from these reefs and analysis of the behavior of fractured limestones as reservoirs serves as a guide for future operations in the area. The future prospects of the northwest Palaway shelf and rise can be assessed from the current discovery success ratio in the exploration for reefs and from initial discoveries in turbidites.

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