

Hydrocarbon Systems within the Ragay Gulf, Southeast Luzon Province, Philippines

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The Ragay Gulf is located in the southeast Luzon Basin between the Bondoc and Bicol peninsulas. Premier Oil, Pearl Energy and PNOC are co-venturers in SC43 which covers the Ragay Gulf; the partnership has evaluated historic data including 93 reports, 303 maps, charts and well logs and ca. 6000 kilometers of 2-D seismic data as well as new seismic and magnetic data and field observations.

The evolution of the Ragay Gulf is controlled by movements along the Philippines Fault system, splays of which trend ca. northwest to southeast through the area creating the three main tectonic elements; the Bondoc sub-basin, the Alabat-Burias high and the Ragay sub-basin. The stratigraphic section within the Bondoc sub-basin is Oligocene to Recent in age. Presumed Oligocene and Lower Miocene carbonates are overlain by a predominantly fluvio-deltaic to shallow marine clastic section with proven hydrocarbon source and seal potential. Clastic hydrocarbon reservoirs are proven on the Bondoc Peninsula; invariably these have been of very poor quality due to the dominance of argillaceous and volcanic components. Isolated pinnacle reefs within the Tortonian section provide excellent carbonate reservoir potential and share the source kitchen proven by the adjacent onshore clastic fields. With no well penetrations the section within the Ragay sub-basin is poorly controlled; seismic interpretation suggests the presence of large tilted fault blocks with potential for carbonate development, analogous to features noted along the Alabat-Burias High.