J. Antonio Cuevas-Leree, M. Alfredo Marx-Rojano (1) Pemex Exploracion y Produccion, Poza Rica, Veracruz, Mexico

The Misantla Basin: A Century of Exploration Success with Enormous Remaining Potential

The Misantla basin, part of the Gulf of Mexico megabasin, lies to the east of the Sierra Madre Oriental in northern Veracruz State. This basin, which has produced 4 mmmb of oil and 4.3 tcf of gas, contains several world class petroleum plays that were discovered in the early XX century. The exploration success history started in 1908 with the well Dos Bocas-2, located by oil seeps, blew-out at 80,000 bopd. This well discovered the Golden Lane trend, a belt of oil fields located over the karstified rim of the Tuxpan Mesozoic carbonate platform. In the 1930’s by gravity measurements was found a basement high to the west of the Golden Lane and subsequent drilling discovered the Poza Rica field and the Tamabra Trend, a series of aprons of deepwater carbonate debris deposited at the base of the slope to the west of the Tuxpan platform. In the 1960’s infill drilling on the Presidente Aleman field tested significant oil production from shallow levels within the Tertiary. This led in the 1970’s, after an extensive exploration program, to the recognition of the Chicontepec play. This play form by low net to gross, stacked thin bedded Paleogene turbidites, has been characterized as one huge oil field with 13 bboe reserves. In the last 5 years the application of new technologies, 3D seismic and reservoir characterization studies had prove that still enormous potential for additional production.