

# The Discovery of an Oolitic Reservoir Play Type in the East Sichuan Basin and Its Implications

Chen, Gansheng, Yang Yu, Zeng Wei, and Zengyun Xian, The Southwest Oilfield, PetroChina, Chengdu, Sichuan, China

The discovery of an oolitic beach reservoir play type in the lower Triassic Feixianguan Formation in the east Sichuan Basin marks a significant breakthrough in the natural gas exploration in the basin. Thirteen oolitic beach reservoirs have been discovered with an estimated geological gas reserve of approximately 229.22?109 m<sup>3</sup>. Through dolomitization by an early mixed water and transformation during a late burial dissolution, the oolitic beaches, which were deposited on carbonate platforms, developed into a residual oolitic dolostone forming the main reservoir rock. The oolitic reservoir rocks are of good reservoir quality. Their distribution was apparently controlled by the sedimentary facies. The best reservoir zones lie at the edge of carbonate platform. The oolitic reservoirs are visualized as high-amplitude “bright spots” in conventional seismic time sections. Their distribution can thus be predicted quantitatively by special processing of the seismic data. This study shows that accurate understanding of the oolitic depositional model and the use of quantitative seismic prediction technology are critical in the discovery of the oolitic reservoir plays.