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**The Cusiana Field, Llanos Foothills, Colombia: Lessons Learned from the Rapid Development of a Giant Oil Field**

The Cusiana Field is a giant oilfield located in the Llanos Foothills of Colombia and comprises three sandstone reservoirs: Eocene Mirador, Paleocene Barco and Cretaceous Guadalupe. All contain light, compositionally variable oil with associated gas.

Discovered in 1992, the Cusiana Field was sanctioned for fast-track development in 1993 and, despite the security problems of the country, was successfully brought on to production in 1995 when the 1.2bcfd gas re-injection facility started-up. Peak production of 310 mbopd was achieved in 1998. 400 million barrels of production, 72 wells and a 3D seismic survey later have yielded surprises, experience and learning relevant to complex development projects elsewhere.

Initially, poor reservoir communication and early water and gas breakthrough into producers were considered serious risks. Detailed sedimentological descriptions were made and a long-term test, coupled with aggressive static and dynamic pressure monitoring, was initiated.

Last described in 1995, subsequent experience has shown that a simpler reservoir description resulting from the integration of high-resolution biostratigraphy, sedimentology, geochemistry and fracture studies with pressure and tracer data has been more successful in describing fluid movement than the earlier sedimentological-based descriptions and has greatly simplified the task of modelling the dynamic reservoir behavior. The structural complexity revealed by well and 3D seismic data is greater than original interpretations, resulting in a better quality original oil-in-place estimate associated with a complex frontal imbricate and multiple oil-water contacts. Among the lessons learned to date is that long-term-testing is very useful for demonstrating fieldwide connectivity but it can lead to difficulty in unequivocal identification of original oil-water-contacts.

The greatest development challenges are not necessarily those originally predicted during the appraisal phase so a balanced technical program is likely to be more successful than one focused at perceived, but not necessarily critical, issues.