

## **Cusiana Field: Understanding the Reservoir and Improving Depletion History**

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Cusiana is a mature onshore oil field, which is producing from a later Cretaceous sandstone reservoir (Guadalupe Formation), and two early Tertiary sandstone reservoirs: Barco Formation of the Paleocene and Mirador Formation of the Miocene.

Cusiana development is characterized by complex compositional hydrocarbon in a highly heterogeneous reservoir. This peculiar combination of oil, gas and water flowing along and intricate fault and fracture net in a still active tectonic environment that is interacting with a high range of matrix permeability reservoir, create undesirable channeling effects in the fluid flow.

Adverse quick gas and water breakthrough has forced to adjust and in some case modify the development plan; changing well designs, injection support strategy both in fluids and injection points. These modifications have shown in many case significant reductions in production decline and have reactivated flow lines and wells previously abandoned

This presentation aims to show the geological interpretations that justify the early development plan and the updates in the geological interpretations using the dynamic data that allow change and more favorable depletion history.