

Southeast Caño Field: Development of a Stratigraphic Field, with Heavy Oil and with an Active Aquifer

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Abstract

The Southeast Caño Field (Caño Sur Este), discovered by Ecopetrol in 2010, presents several challenges from the point of view of reservoirs, operations, and projects, as it is a heavy oil reservoir, with low thickness of the oil-bearing zone, along with highly complex geology and an active aquifer.

During the exploration phase, stratigraphic and exploratory wells were drilled (vertical, directional, and horizontal) in this reservoir which has 14° API oil, viscosity between 200-500Cp, and a system of reservoir pressure controlled by an active aquifer. The results have proved that there is a high stratigraphic complexity in the reservoir, commercial production of hydrocarbons in sands with net thickness of less than 7 feet, and production behavior governed to a high degree by the presence of shale seals or levels of sands of lower quality that act as barriers.

This work presents the focus that was adopted since the exploratory stage for adequate reservoir characterization and construction methodology for integrated models that have made it possible to set up the field development plan, the required well architecture, and completions that make it possible to maximize the recovery factors.