

Dynamic Behavior of May Field, Case Study

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Abstract

May Field is a mature gas condensate field that is currently in a saturated state below the dew point. After the field reached its production peak in March 2012, condensate production began to decline.

A specific workflow was used to help to answer the question of where water is coming from, and also know what is happening around the zone. Seismic, petrophysical evaluation, diagrammatic well position and production analysis were conducted to deliver a solution to the client.

The Chan plot analysis suggested that the water inlet to the wells is due to channeling. Because the reservoir is a naturally fractured reservoir, the water is associated with channeling through fractures. There is direct communication between wells, so every operating condition changed in one well will affect the other wells.

After closing the well with high water production, water production increased in the rest of the wells that did not produce before. A water shut off solution was analyzed and a new production strategy started in order to control water entrance.