

Prospects of Arresting Excess Water from wells Producing from KS-II and KS-III sands: a Case Study from Nandasan Field of Mehsana, India

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In mature or old reservoirs, most of fluid production is water. Water affects every stage of oil field life from exploration---the oil water contact is a crucial factor for determining oil in place---through development, production and finally to abandonment. As oil is produced from a reservoir, water from an underlying aquifer or from injectors eventually will be mixed and produced along with the oil. A continuous increase in water production is a normal behavior in the life time of a field. Cause of excess water can be anticipated with following reasons.

The hydrocarbon play in Nandasan field is mainly in two sequences. One in the shallow level of Wavel, Kansari, Sertha and Chatral sands in the depth range of 1200-1520mt and the other in deeper coal-sand-shale sequences of Mehsana member of Kadi formation. Pay sand KS-II and KS-III of Kalol formation are producing under active water drive and sand KS-XIII A2 is producing in depletion/mixed drive where as Mehsana sands are producing in depletion drive.