SPE 109295: **Non-Darcy Flow Effects in Dual-Porosity, Dual-Permeability, Naturally Fractured Gas Condensate Reservoirs.**

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**Abstract**: This paper addresses the retrograde condensation behavior in natural fractures and in the near wellbore region of a naturally fractured reservoir (NFR). The study includes the combined effect of non-Darcy flow in presence of retrograde condensation and wellbore damage on pressure transient analysis of naturally fractured reservoirs. A single well compositional model was constructed and used to evaluate both the early-time and late-time characteristics of the pressure transient data.

In naturally fractured reservoirs the high velocity region could be substantially beyond the near wellbore region because of the narrowness of the fractures. To assess this situation, draw-down, build-up and multi-rate tests were simulated in rich gas and lean gas condensate reservoirs. It was concluded that the gas condensation in the near wellbore region significantly increases the calculated skin factor beyond the physical damage.