

Title of article: Well Deliverability Predictions of Gas Flow in Gas Condensate Reservoirs, Modelling Near-Critical Wellbore Problem of Two Phase Flow in 1-Dimension

Author(s): Orodu, O. D., Ako, C. T., Makinde, F. A. and Owarume, M.

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Abstract

Production of gases from gas-condensate reservoirs are known to bear certain challenges largely due to the formation of retrograde condensates that hinder gas flow. The drop out of this liquid creates flow regions that are characterized by the liquid saturation as it affects the mobility of the two phase flow, thereby preventing the effective modeling of well productivity. In this study, a predictive model based on an analytical approach is developed to predict gas flow in gas condensate reservoirs. This study compares the estimated gas flow from the developed model for gas-condensate reservoirs to the flow of an existing model for gas reservoirs. This study observes the effects of liquid drop-out on productivity at low pressures and the condensate unloading pressure, which is comparable to that of commercial