

عنوان مقاله:

Application of TDS Technique in the Well Testing of Twophase, Oil and Water Naturally Fractured Reservoirs with Unsteady State Flow Regime

محل انتشار:

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خلاصه مقاله:

Well test is one of the most important methods for getting information about well and reservoir condition. Up to now different methods of well testing consist of conventional method, type curves method and direct synthesis method are developed by researchers. The direct synthesis technique couples the characteristic points and lines from log-log plot of pressure and pressure derivative data resulting in simple equations to solve for the desired reservoir parameters. This method is used for naturally fractured reservoirs, multi rate testing in naturally fractured reservoirs and many other conditions. Under two phase flow condition, two phase flow parameters will affect on pressure pattern. Without proper consideration of two phase flow, the estimated values for λ and ω by using single phase methods are subject to errors. As many reservoirs in Iran are naturally fractured reservoirs, and water injection is one of the most important EOR projects using in this reservoirs, sometimes will be observed that water reaches from injection well to the production well and causes error. So in this project we use direct synthesis technique in two phase naturally fractured reservoirs for the first time. the flow from matrix to fracture is unsteady state and by using of relative permeability and viscosity, develop new equations to calculating reservoir parameters

کلمات کلیدی:

WELL TEST, TWO PHASE OIL AND WATER, NATURALLY FRACTURED RESERVOIRS, SYNTHESIS DIRECT TECHNIQUE

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