Determining Relative Permeability Correlation for an Oil Field

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Abstract

One of the most important parameters in modeling of oil and gas reservoirs is relative permeability. Relative Permeability is a function of wetting/non wetting phase saturations and the mineralogy of reservoir rock relative to the pore size distribution. In this paper, we discuss about experimental measuring of relative permeability for a reservoir rock of a formation of an oil field for two phase flow (Brine and Kerosene). Relative permeability values will be determined at each water saturation value by injection brine and kerosene in core flood apparatus. Then relevant relative permeability curves for each phase will be plotted as a function of water saturation value and then, wetting ability condition of the samples will recognized through these curves. Finally, we try to find a correlation for determination the relative permeability of this oil field.