

PETE 662

Production Engineering

Chapter 2

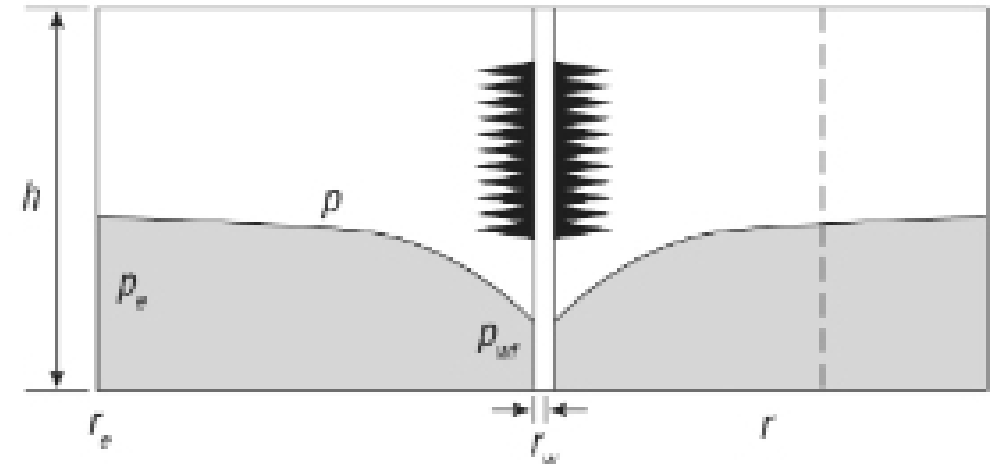
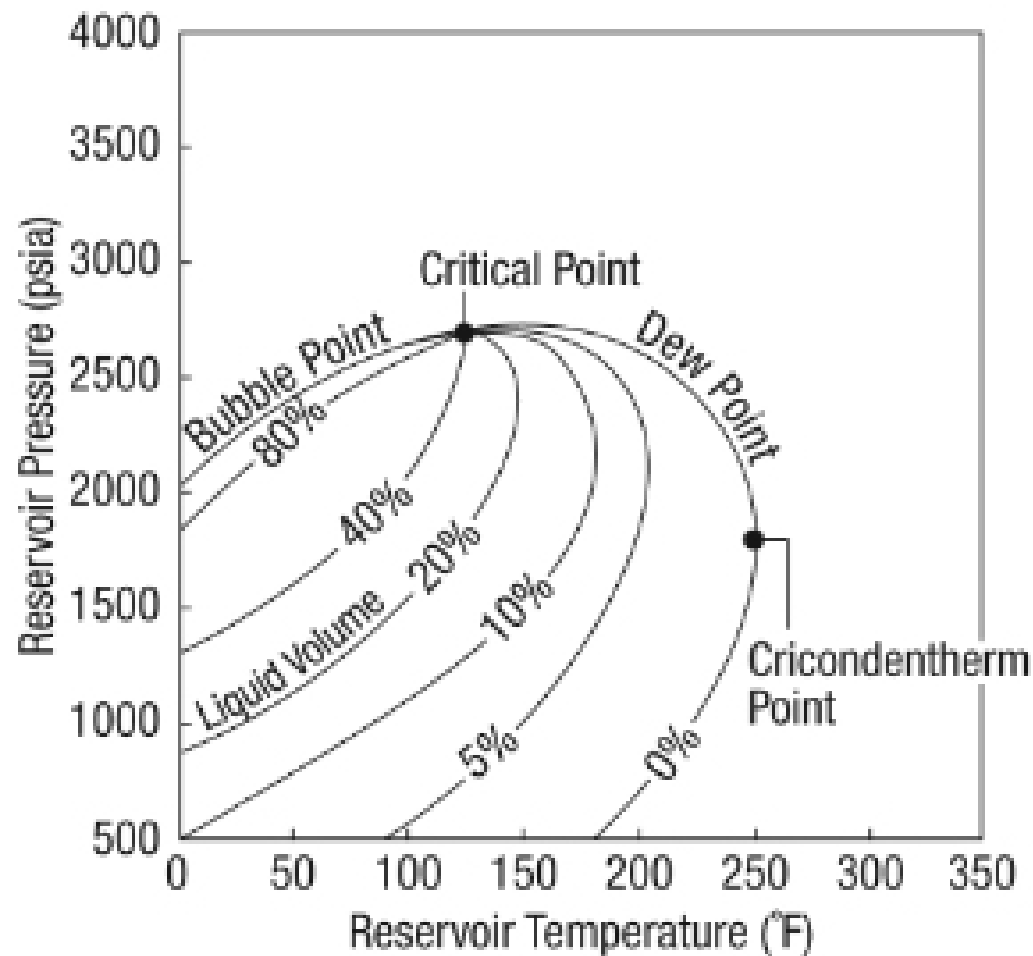
Production from Undersaturated Oil Reservoirs



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Undersaturated Oil Reservoirs



- $p_e, p_{wf} > p_{bubble\ point}$
- single phase flow in reservoir rock

Undersaturated Oil Reservoirs

Darcy's Law for Single Phase Radial Flow

$$q = \frac{kA}{\mu} \frac{dp}{dr} \text{-----} (2-1)$$

where:

q : flow rate

k : permeability

A : cross - sectional area perpendicular to flow

μ : fluid viscosity

p : pressure

r : radial distance from center of well