

Characteristics of Reservoir Depletion / Build Up

Key Parameters: C_r , Aquifer, Q_o (including leakage, if any)

Assumptions: C_r : 12×10^{-6} psia⁻¹ [μ sips]
 Aquifer: 3.8x reservoir oil volume
 Q_o : 35 mbd

Sensitivities: C_r : -200 psia, +100 psia [6, 18 μ sips]
 Aquifer -800 psia, +100 psia [None, 14x]
 Q_o -350 psia [60 mbd]

Final M56E Pressure: 9,350 (lowest sensitivity) – 11,350 – 11,600 psia

S.I. Bottomhole (and hence tubing head) pressure will start at 1,500 – 3,000 psia below this (but 90% of this difference will disappear in 6 hours)

cases in red were used for SITHP calculations