HW#18: Parameter values

$p_i = p_o = 500$ psia

$T_i = T_R = 100\ ^oF$

$S_{wi} = S_{wr} = 0.20$

$S_{oi} = 0.80$

$S_{gi} = 0$ [for part (a), (b), and (c)]

$S_{gi} = 0.10$ [for part (d), (e), and (f)]

$\Delta x = \Delta y = 100$ ft

$\Delta z = 20$ ft

$\Delta t = 1\ day$

$\phi = 0.3$

$k = 3,000$md

$c_\phi = 10 \times 10^{-6} psi^{-1}$

$k_{rw}^* = 0.2$

$k_{ro}^* = 0.6$

$k_{rg}^* = 0.5$

$nw = 3$

$no = 4$

$ng = 3$

$S_{orw} = 0.30$

$S_{org} = 0.20$

$S_{gr} = S_{gc} = 0.05$

$p_{cog}^* = 10$ psia

$p_{cwo}^* = 5$ psia

$nc_{og} = 1.20$

$nc_{wo} = 1.76$

$p_{entry} = 3$ psia

$MW_o = 250$

$\xi_g q_g = \dfrac{35,000}{18} \dfrac{lb_{mole}}{day}$

$k_T = 1.6 \dfrac{Btu}{(hr.ft.\ ^oF)}$

$C_R = 0.206 \dfrac{Btu}{(lb_m\ ^oF)}$

$q_g H_g = 35 \times 10^6 \dfrac{Btu}{day}$

$\epsilon_p = 10^{-3}$

$\epsilon_{S_o}, \epsilon_{S_g} = 10^{-4}$

$\epsilon_{T_s}, \epsilon_T = 0.1$