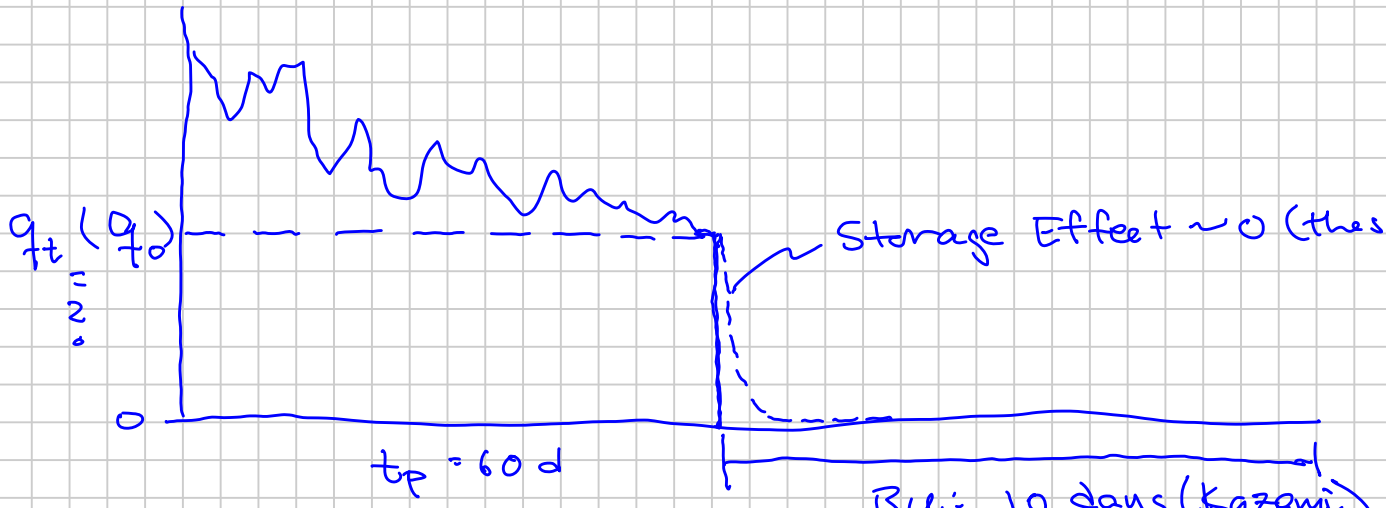
Note Title 3/20/2018

BAKKEN BUILD-UP TEST (Kazemi - Kurtoglu)
Book Ch. PhD thesis

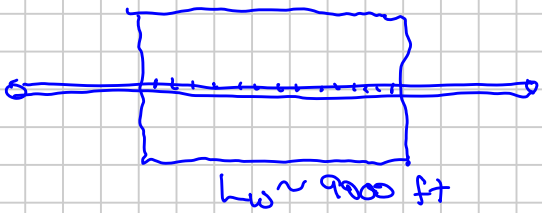


$\bar{k}_{f,eff} = \bar{k}_{WT} = \bar{k}_{BU}$ reflects k_R & k_f, SRV vs FN k_m ...

$\times 5^2$ ~ 0.02 md (20% L_w) k_m "k_{mf}"

0.001 md (100% L_w) 10 - 100s md

$L_f = 2x_f$ ~ 20% – 50% L_w



Book:

$$k_{f\,eff} = k_f \cdot \phi_f + k_m$$

Finite Conductivity Fracture

k_R

$k_{BU} = f(L_f = ?\ \%\ L_w)$

$\propto \frac{1}{(\%\,L_w)^2}$

$0.02 = C \cdot \frac{1}{(0.2)^2}$

$0.001 = C \cdot \frac{1}{1^2}$

Dual Porosity Approx.

$k_f = ?$

$k_m = 2 \quad k_f = 20\,000 \quad \phi_f = 0.001$

$k_{f,eff} = 2 + 0.001\,(20\,000) = 22$ md

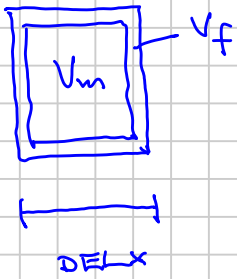
DUAL POROSITY : grid-to-grid flow

$(\phi_f\, k_f)$? in Darcy Eq.

DPDP : grid-to-grid flow

$\phi_f\, k_f + k_m$? in Darcy

$$\phi_f \equiv \frac{V_f}{V_f + V_m} \; ?$$



Single Matrix Block

$V_f = DELX \cdot DELY \cdot DELZ \cdot \phi_f$

$V_m = \underline{\qquad\qquad\qquad\qquad} \cdot \phi_m$