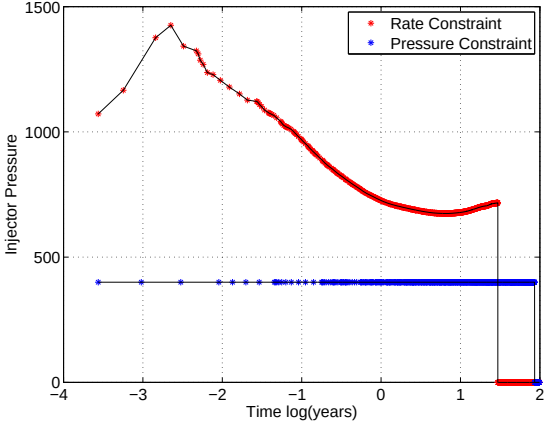
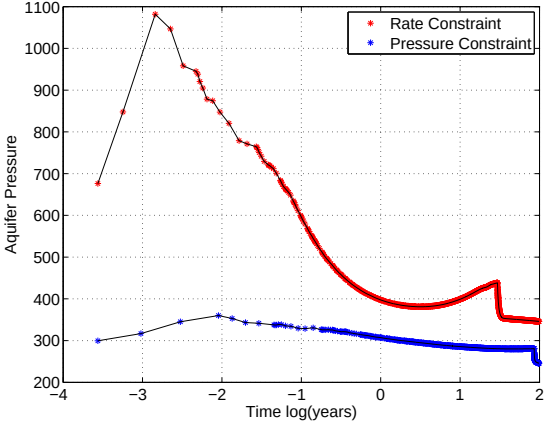
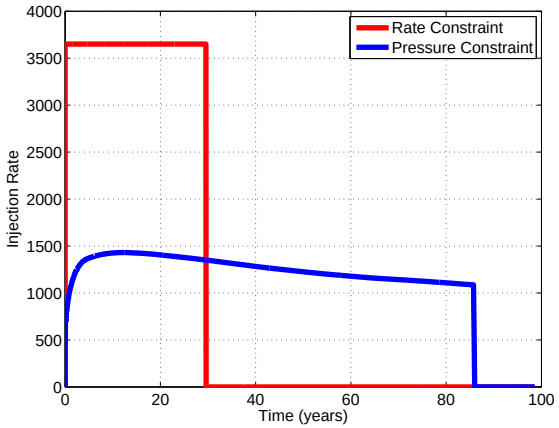


(a) Pressure in the injector versus logarithm of time.



(b) Average aquifer pressure versus logarithm of time.



(c) Volumetric injection rate.

Figure 7: Aquifer and well pressure and injection rate in different injection scenarios shown for a test case.

Table 5: Simulation parameters used in the study.

Parameter	**Description**	**Value**
S_{rw}	Residual brine saturation	0.2
$S_{r_{CO_2}}$	Residual CO_2 saturation	0.2
$\mathrm{K}_{r_{CO_2}}$	CO_2 relative permeability	$(1 - S_{CO_2} - S_{rw})^2$
K_{rw}	Brine relative permeability	$(S_w - S_{r_{CO_2}})^2$
ρ_{CO_2}	CO_2 density at surface conditions	700 kg/m^3
ρ_w	Brine density at surface conditions	1000 kg/m^3
C_m	Medium compressibility	0.3×10^{-6} 1/bar
P_0	Reference pressure for compressibility	400 *bar*
μ_{CO_2}	CO_2 viscosity at surface conditions	0.04 cP
μ_w	Brine viscosity at surface conditions	0.4 cP
q	Target injcetion rate	3600 m^3/day
P_{cr}	Critical well pressure	400 bar