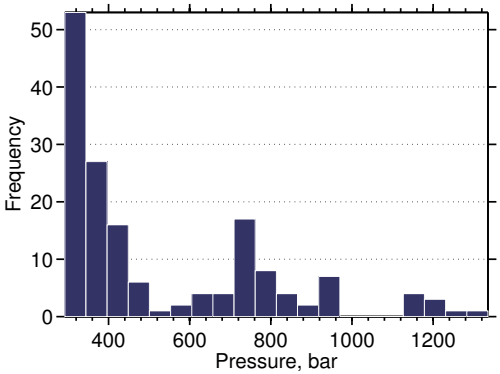
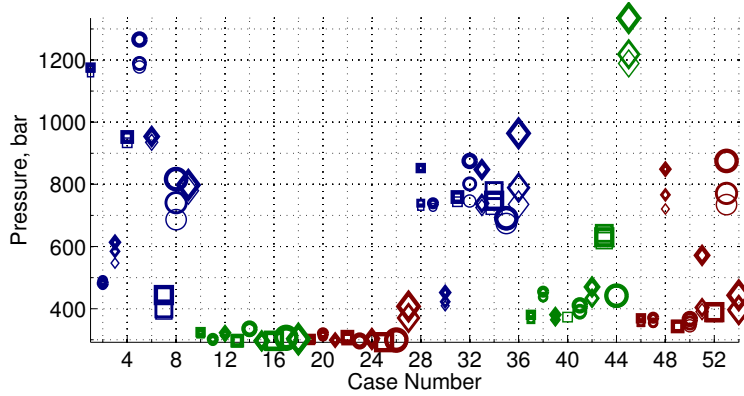
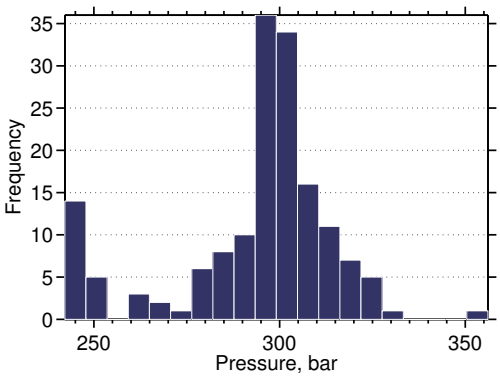


(a) Histogram of pressure values.

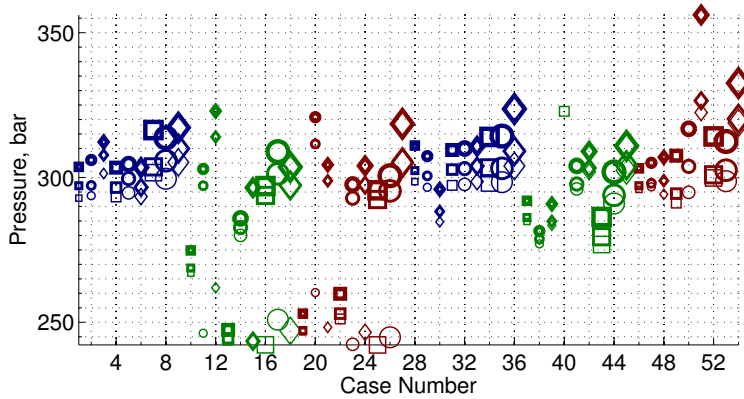


(b) Case plot of pressure values.

Figure 10: Average aquifer pressure for all cases in the rate-constrained scenario.



(a) Histogram of aquifer pressure values.



(b) Case plot of aquifer pressure values.

Figure 11: Aquifer average pressure for all cases in the pressure-constrained scenario.

7.5 years (the dotted red line in the figure). The rest of the cases require longer injection time, due to the lower injectivity of the medium. This leads to pressure control in the injector, followed by a decrease in the injection rate.

Different codes used in the plot of Figrure 9 are describe in Table 3. Most of the cases with lower injection rates in the plot are colored blue, which translates to a low aggradation angle. Also cases with closed faults, denoted by thick markers, have (significantly) longer injection time. Progradation effect is apparent on the higher aggradation cases: for some of the cases colored green and red in the second half of the plot in Figure 9, injection takes longer than the corresponding cases in the first half. Therefore, down-dip progradation, independent of aggradation angle level, can result in lower injectivity.

4.2 Well and aquifer pressure

To see the overpressure caused by different heterogeneities, we compare cases for their average pressure and well pressure elevation. Histograms of average aquifer pressure are shown in