Digital Twin w/ *controlled* injectivity

Ringrose, Philip. "How to store CO2 underground: Insights from early-mover CCS projects." (2020): 978-3.
Møyner, Olav, Martin Johnsrud, Halvor Møll Nilsen, Xavier Raynaud, Kjetil Olsen Lye, and Ziyi Yin. 2023. Sintefmath/Jutul.jl: V0.2.5 (version v0.2.5). Zenodo. https://doi.org/10.5281/zenodo.7775759.

Mitigate
fracture risk

Develop a scheme to

- ensure *induced* reservoir *pressure* remains below the fracture *pressure* with *high* probability
- DT can *adapt* the *injection* rate to minimize risk

Make use of

- Jutul.jl's numerical reservoir simulations
- numerical approximation of the gradient
- samples from
  - prior on permeability $p(K)$
  - the *posterior* for the *state* $p(\mathbf{x}_{1:3} \mid \bar{\mathbf{y}}^{o}_{\mathbf{1:3}})$