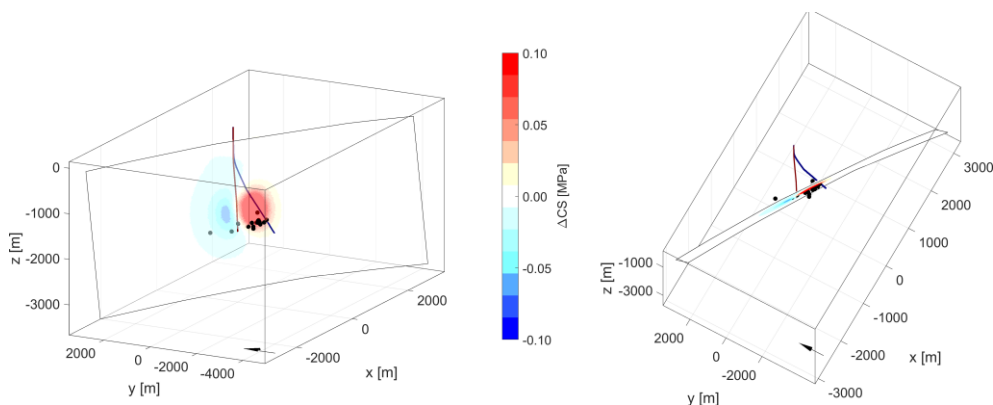


Induced Seismicity Risk Management at the Californië Geothermal Project

Over several years, Q-con has supported the geothermal project Californië (the Netherlands) with several seismic hazard analyses (SHA) and seismicity studies. These studies provided the basis for managing induced seismicity risks at the geothermal site. Observed earthquakes at Californië agree with the hazard scenarios anticipated in our preceding studies, demonstrating that the seismic risk management sufficiently covered the seismic hazard level of the project at all times.

Importantly, the driving factor causing the induced seismicity at Californië can be attributed to thermo-elastic stresses rather than to pore-pressure increase (see figure below).

We have summarized our Californië studies in a peer-reviewed paper which can be found [here](#).



Simulated thermo-elastic stress perturbations on the Tegelen fault and observed earthquakes (black dots). Earthquakes predominantly occur in regions where thermo-elastic stresses bring the fault closer to failure (warm colours).