

SHARP Storage

Stress history and reservoir pressure for improved quantification of CO₂ storage containment risks



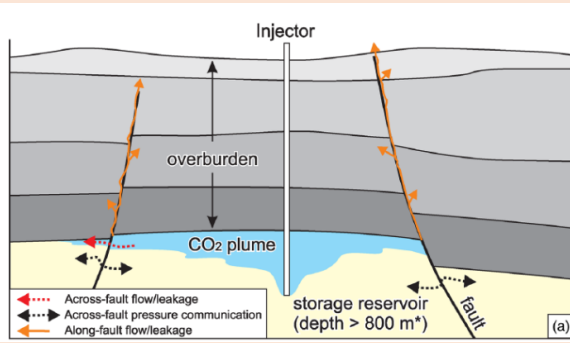
US – Norway Bilateral Meeting
Bergen, June 30th, 2022

Elin Skurtveit (NGI), project coordinator



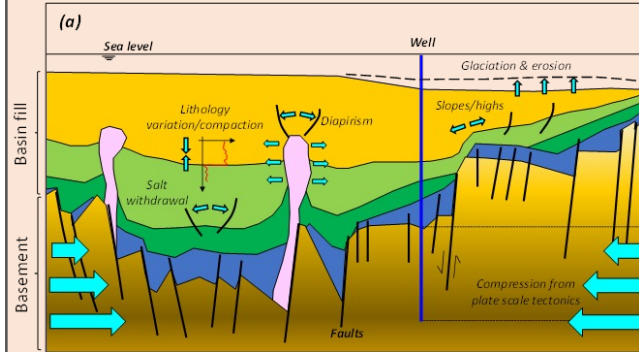
Challenges

Containment risk



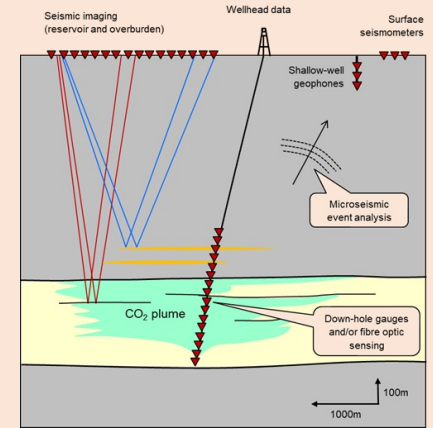
- Uncertainties
- Pressure/temp changes
- Seismicity

Stress - strain - failure



- Tectonics
- Local stress
- Glacial loads
- Failure mode

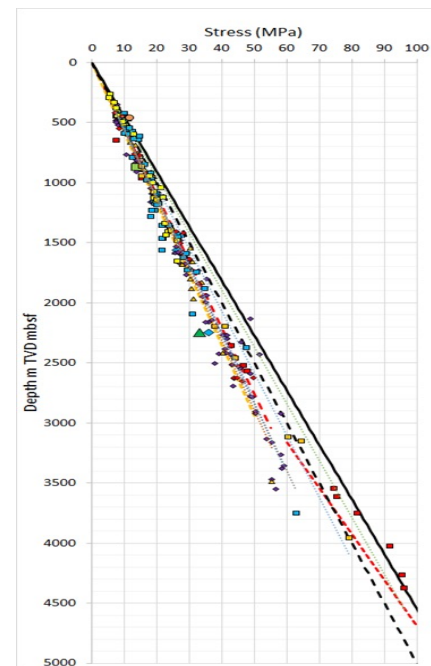
Monitoring



- Targeted
- Right time – right place
- Cost efficient



Lab scale

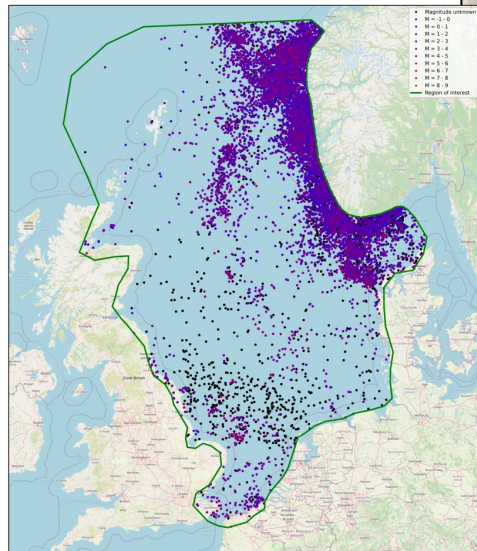


Field data

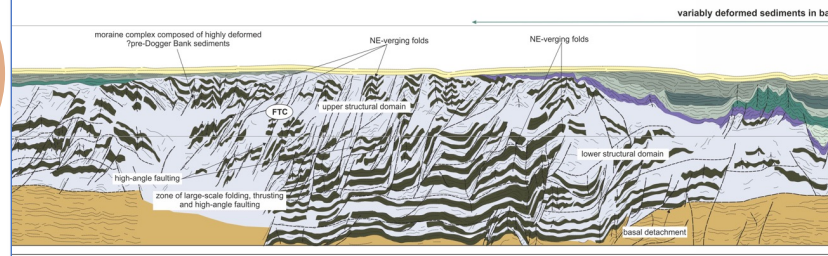
“SHARPER” Stress Models

Seismicity

History



south-western fold and thrust complex (FTC)



SHARP Consortium

- **Norway:** NGI, Equinor, Norsar, NTNU, Alcatel (ASN)
- **UK:** U.Oxford, Rockfield, BGS, BP
- **Denmark:** GEUS, INEOS, WintershallDea
- **Netherlands:** TU Delft, Risktec, Shell
- **India:** IIT Bombay, Equinor, EIL, Oil India, Shell

Consortium partners

Consortium partners: NGI, NORSAR, NTNU, equinor, ASN, ALCATEL SUBMARINE NETWORKS

Associated Indian industry: equinor, Oil India Limited, IIT BOMBAY, EIL (Engineers India Limited)

Other partners: BGS, UNIVERSITY OF OXFORD, bp, Rockfield, INEOS Oil & Gas Denmark, wintershall dea, GEUS, TUV Rheinland, Risktec, TU Delft, Shell

Map Labels: Northern Lights, Smeaheia, Hord area, Aurora, Norway, Lisa, Nini, Denmark, Rajasthan, India, United Kingdom, Net Zero Teesside, Endurance, Greater Bunter, Sandstone area, Aramis, Netherlands

