Pressure, faults, and CO_2 leakage

Translating lessons from onshore analogues to offshore

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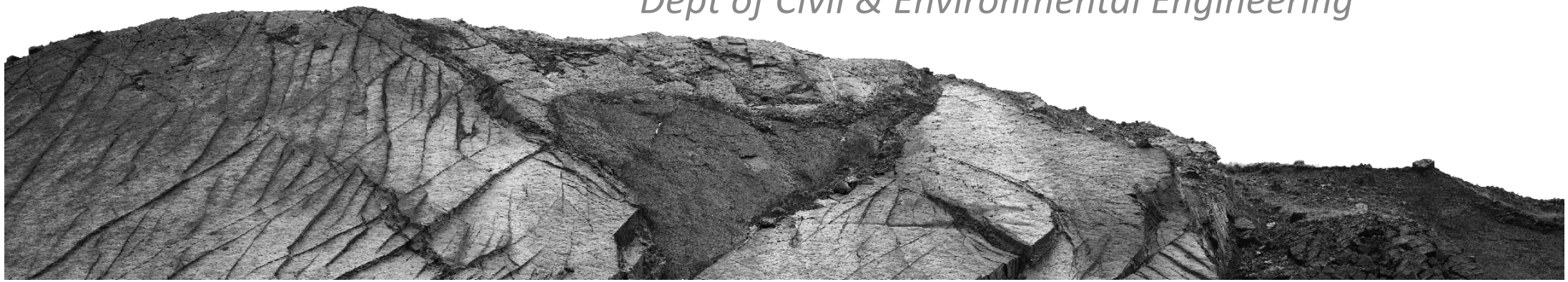
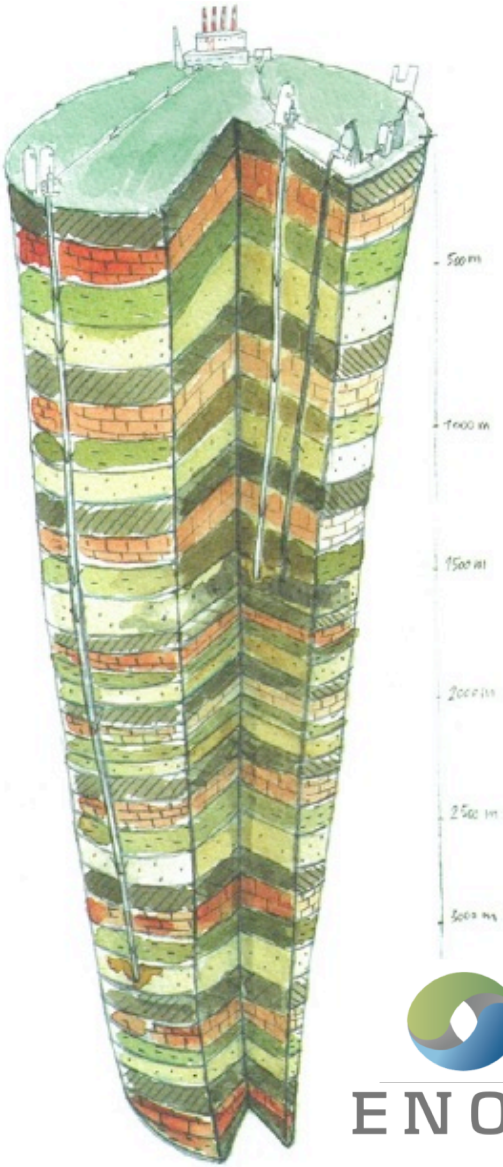


Pressure, faults, and CO_2 leakage

Pressure seal

Rock layers with anomalously high pressure



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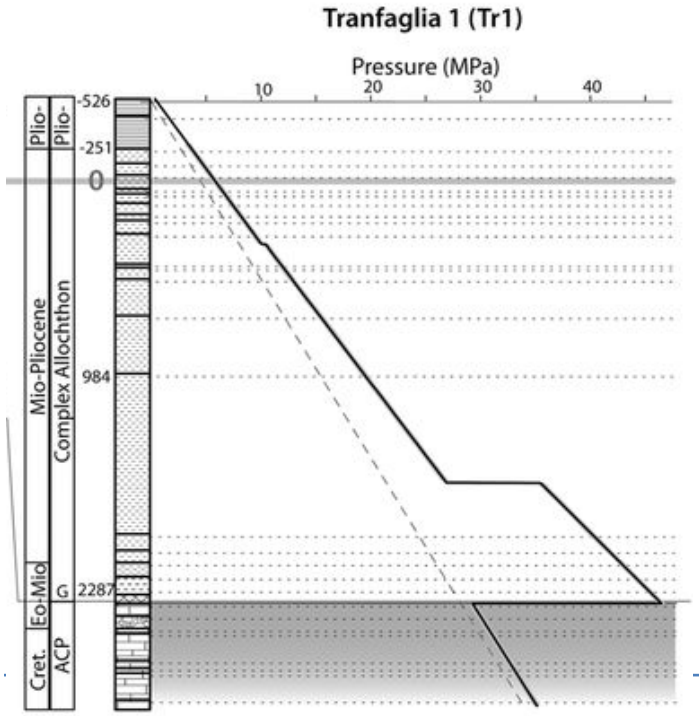

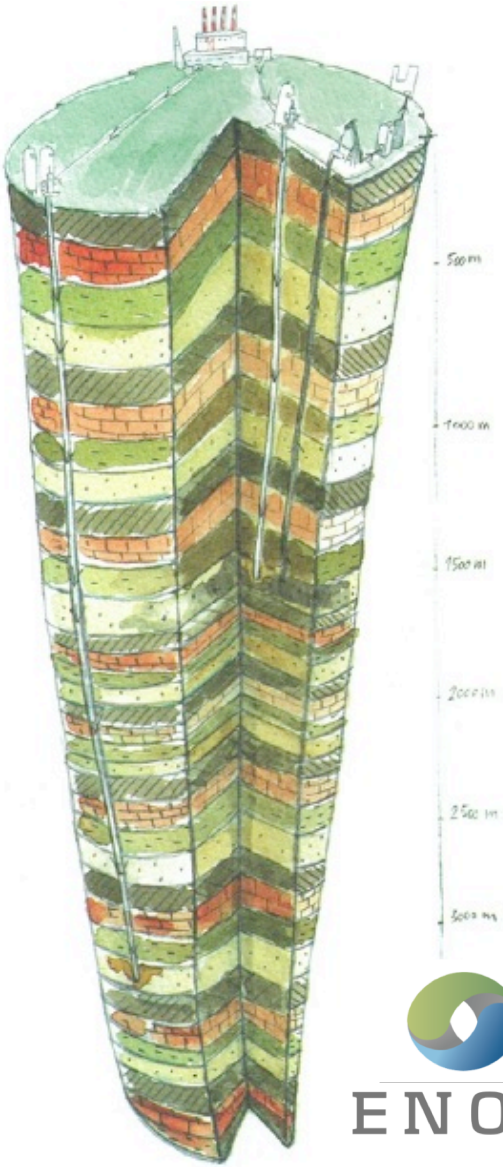

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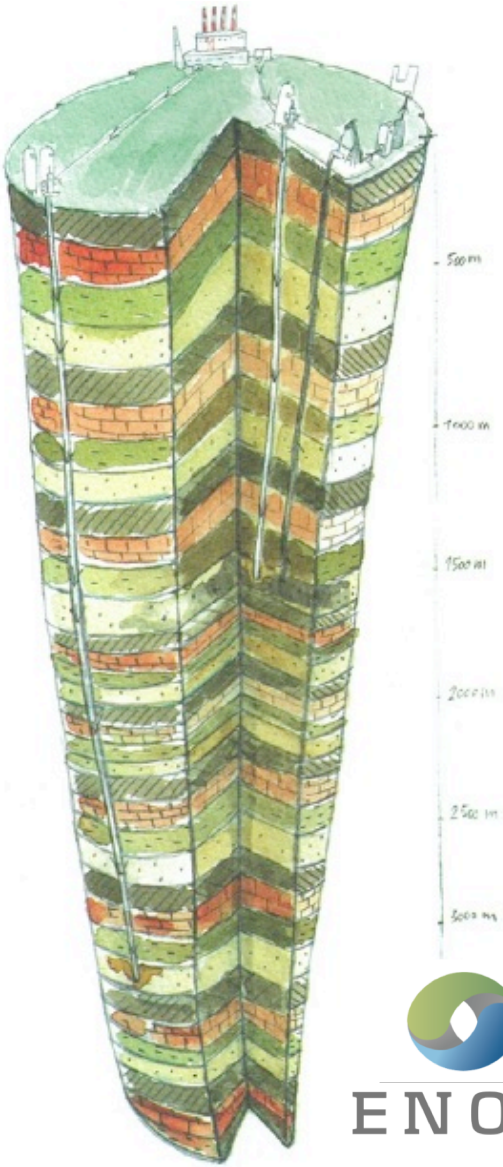
- No escape: a good seal
- The pressure gradient is reversed



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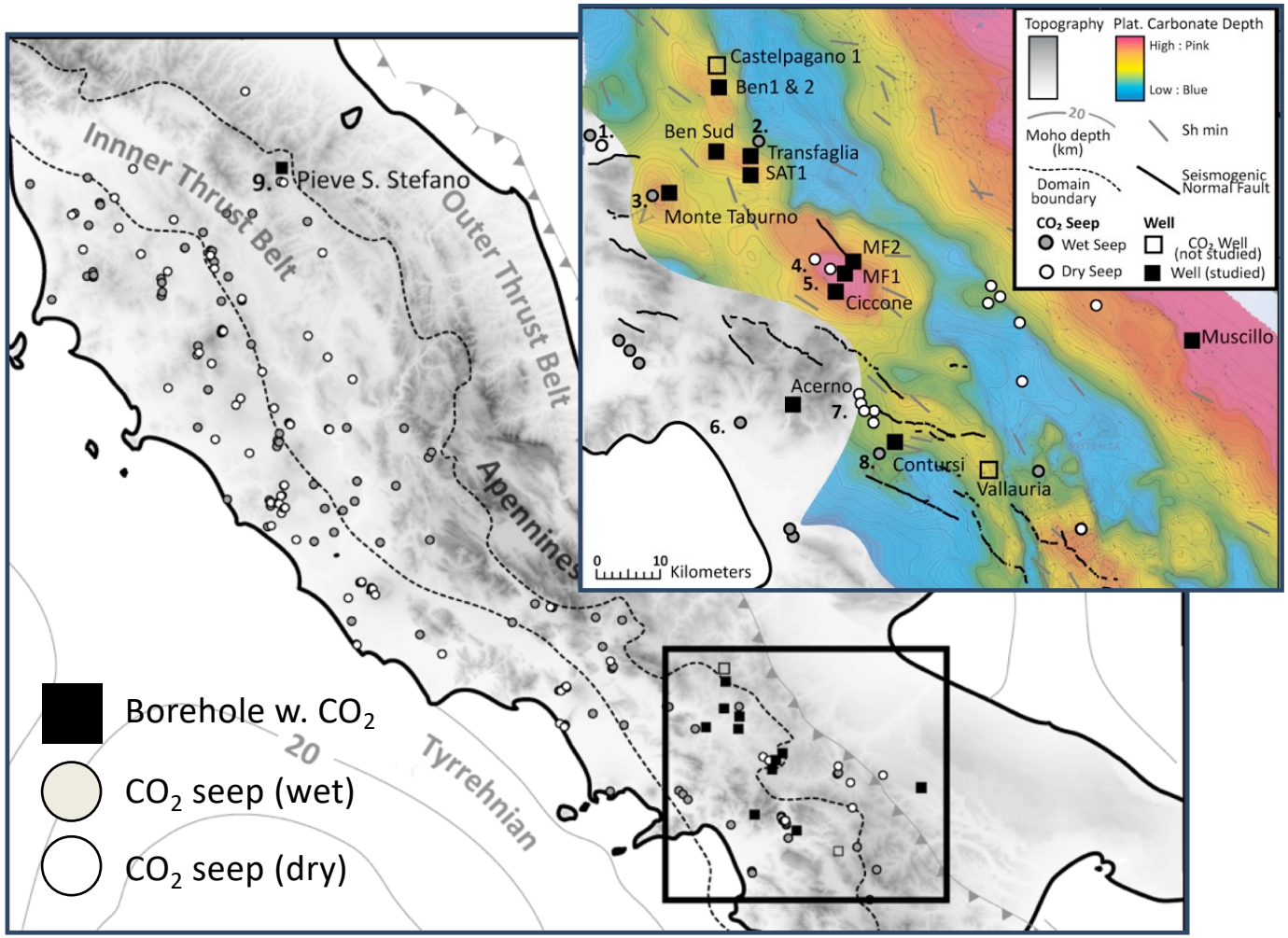
Pressure, faults, and CO_2 leakage: Italy



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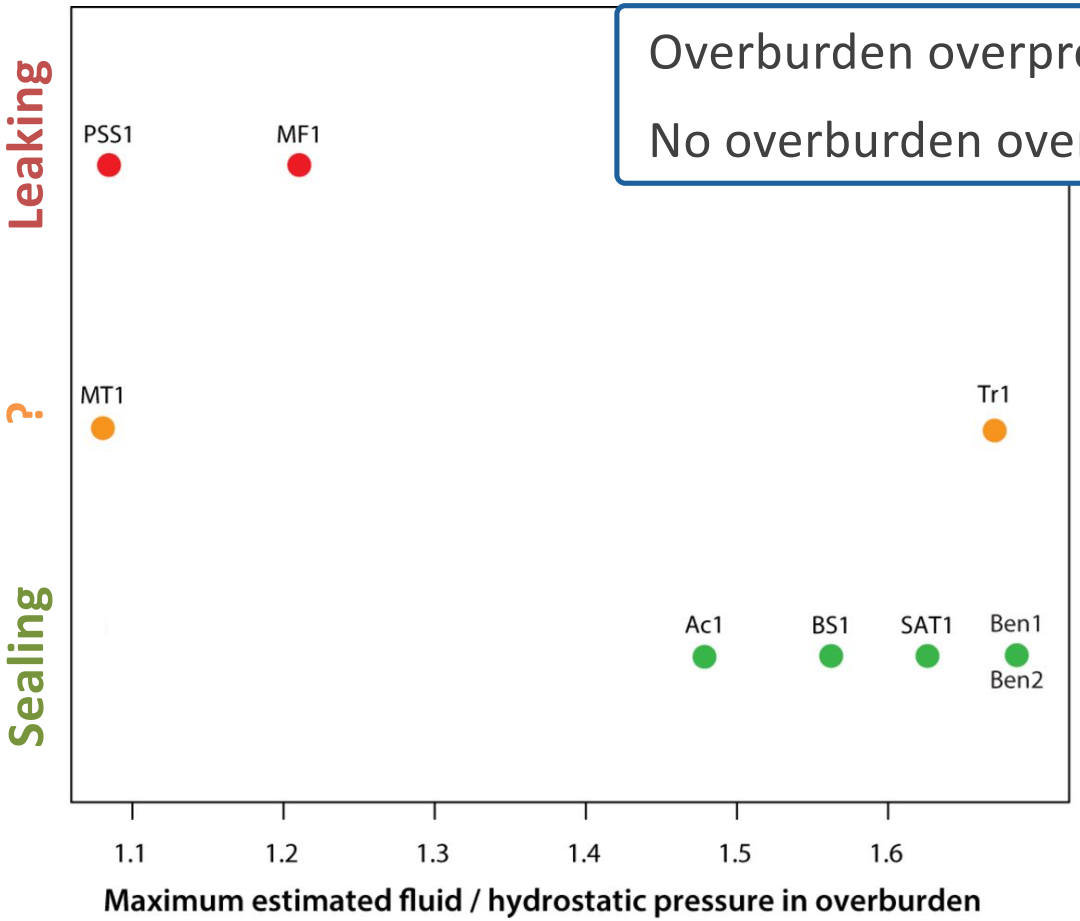

Overburden overpressure = **sealing**

No overburden overpressure = **leaking**

[Roberts et al. (2017) Geol Soc London](#)

[Miocic et al. (2016) IJGHGC](#)

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Natural CO_2 sites in Italy show the importance of overburden geopressure, fractures and faults for CO_2 storage performance and risk management

Jennifer J. Roberts, Mark Wilkinson, Mark Naylor, Zoe K. Shipton, Rachel A. Wood and R. Stuart Haszeldine
Geological Society, London, Special Publications, 458, 181-211, 19 June 2017, https://doi.org/10.1144/SP458.14

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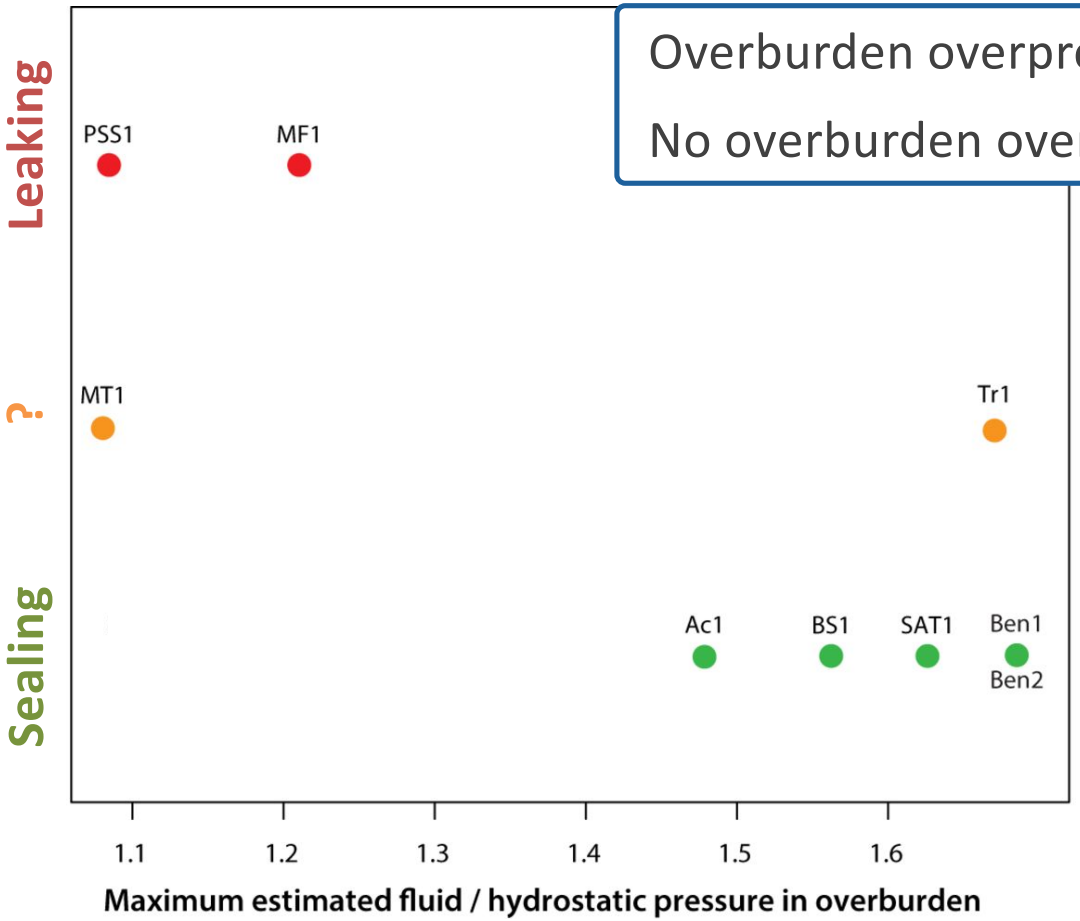

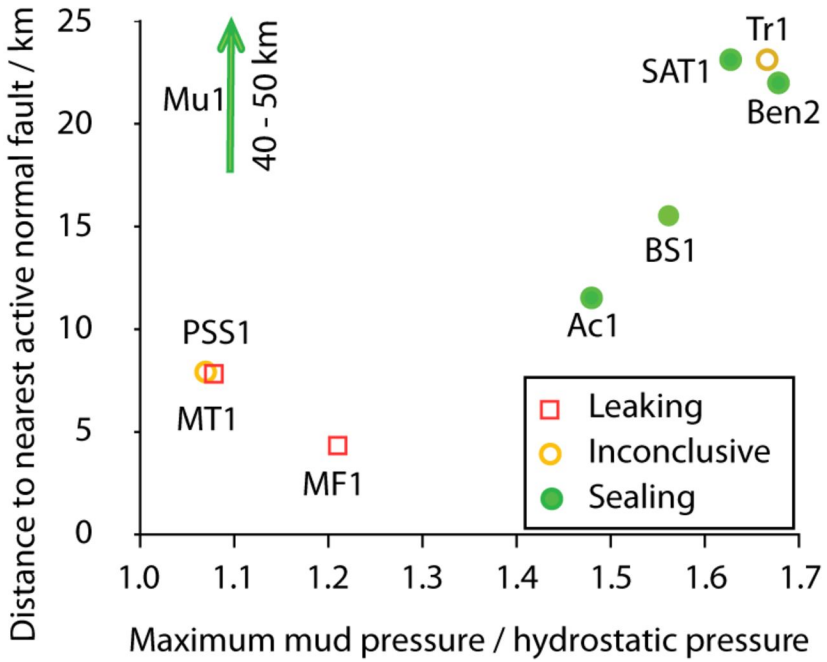

Roberts et al. (2017) Geol Soc London

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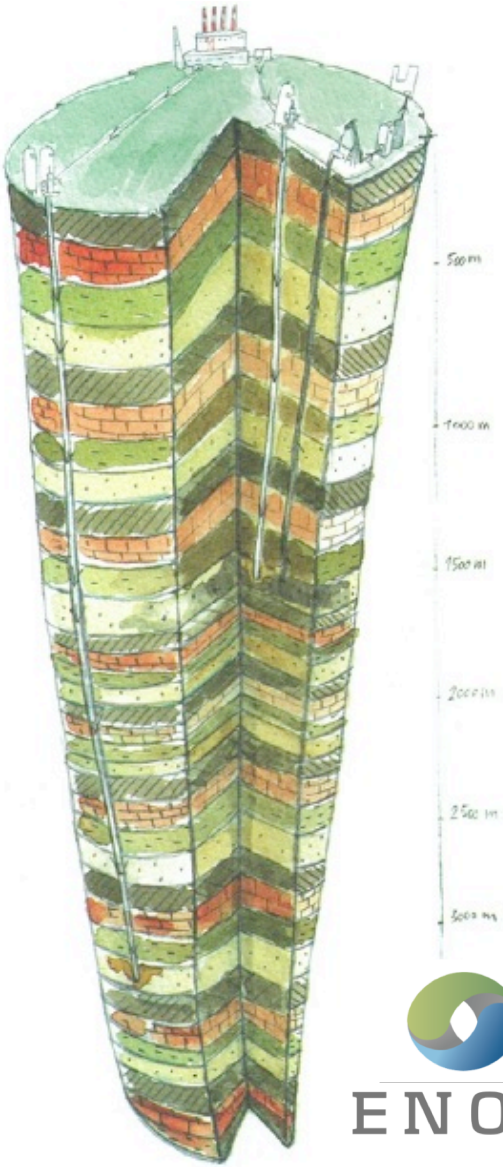

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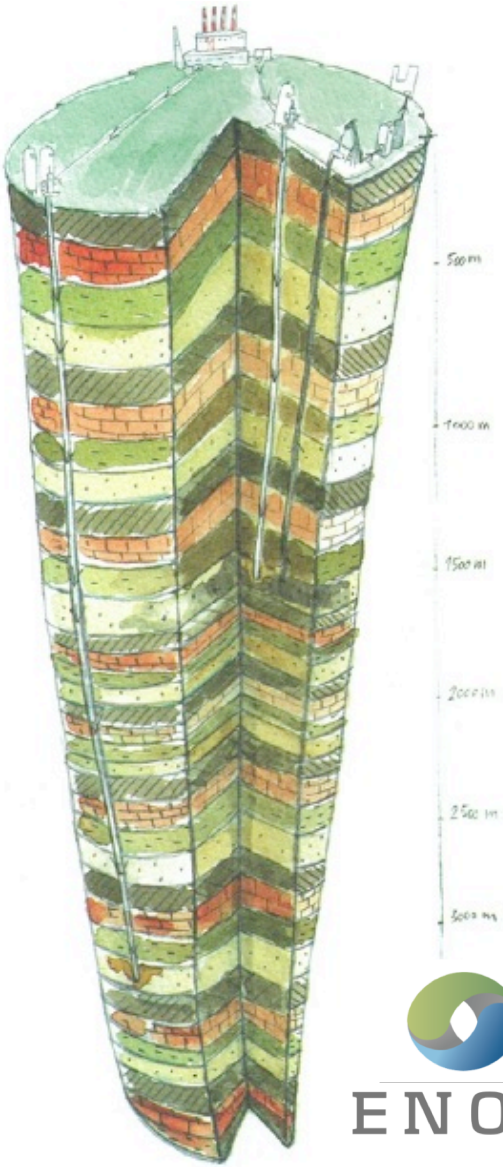
➔ Site selection / screening criteria

➔ Reduce monitoring requirements?



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Thank You

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