



Clay mineral occurrences in volcanic and granitic geothermal contexts: signatures of high temperature fluid circulations in natural permeable fractures

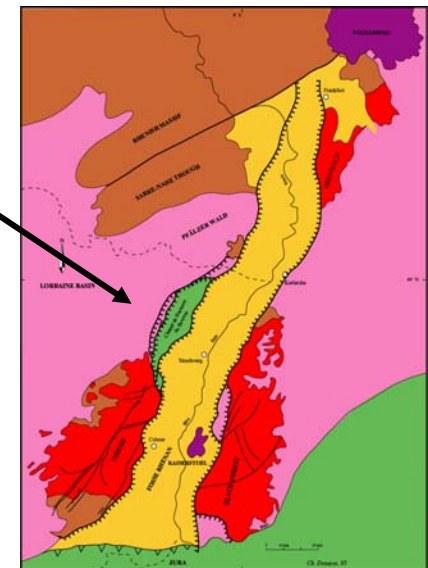
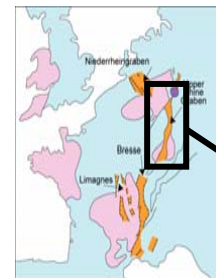
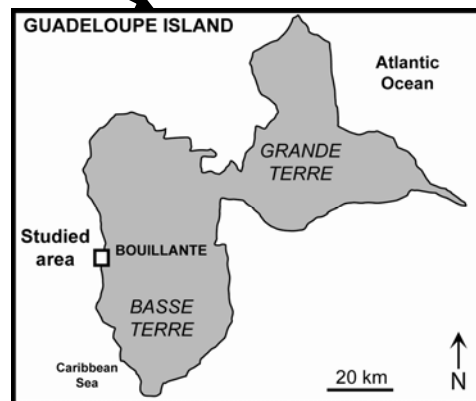
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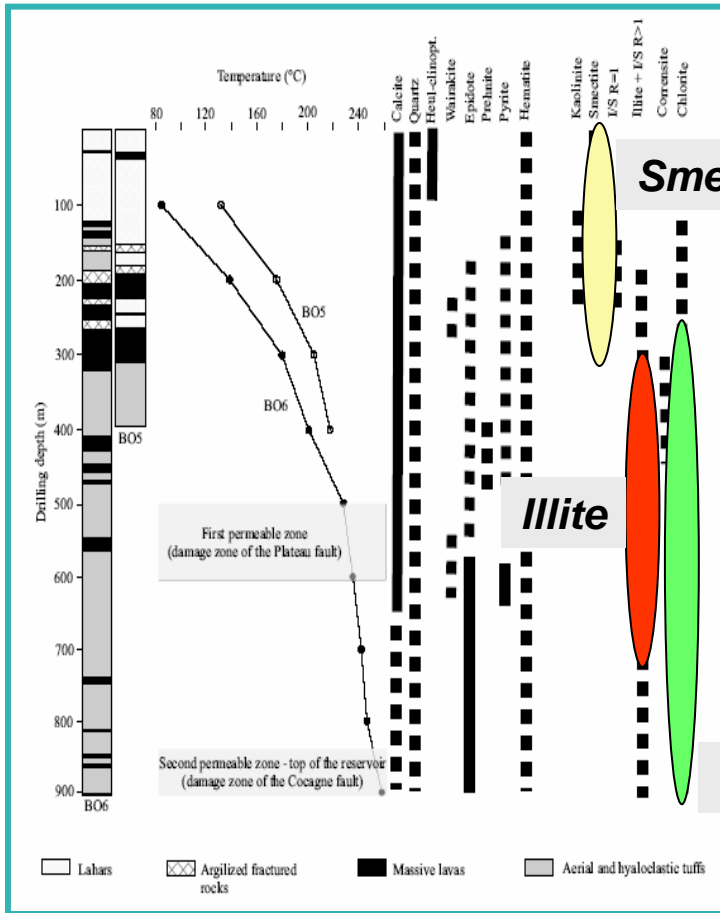


Objective

- Relationships between clays, natural fractures and permeability
- Volcanic area of Bouillante (Guadeloupe))
- Granite basement of the EGS Soultz wells (France)



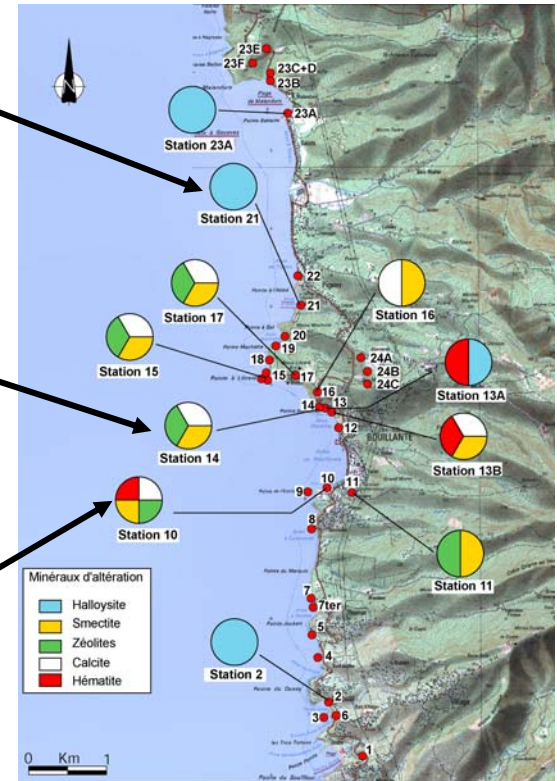
Hydrothermal alteration at Bouillante



Well BO-6

Department of Geothermal Energy (GTH)

ENGINE Workshop, Volterra (Italy), April 2-4, 2007



Geothermal Field data

Clays-fractures-permeability at Soultz

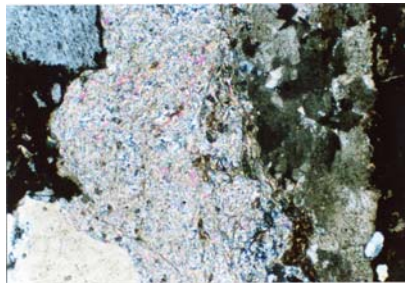
Damaged fracture zone

Clays: illite + tosudite

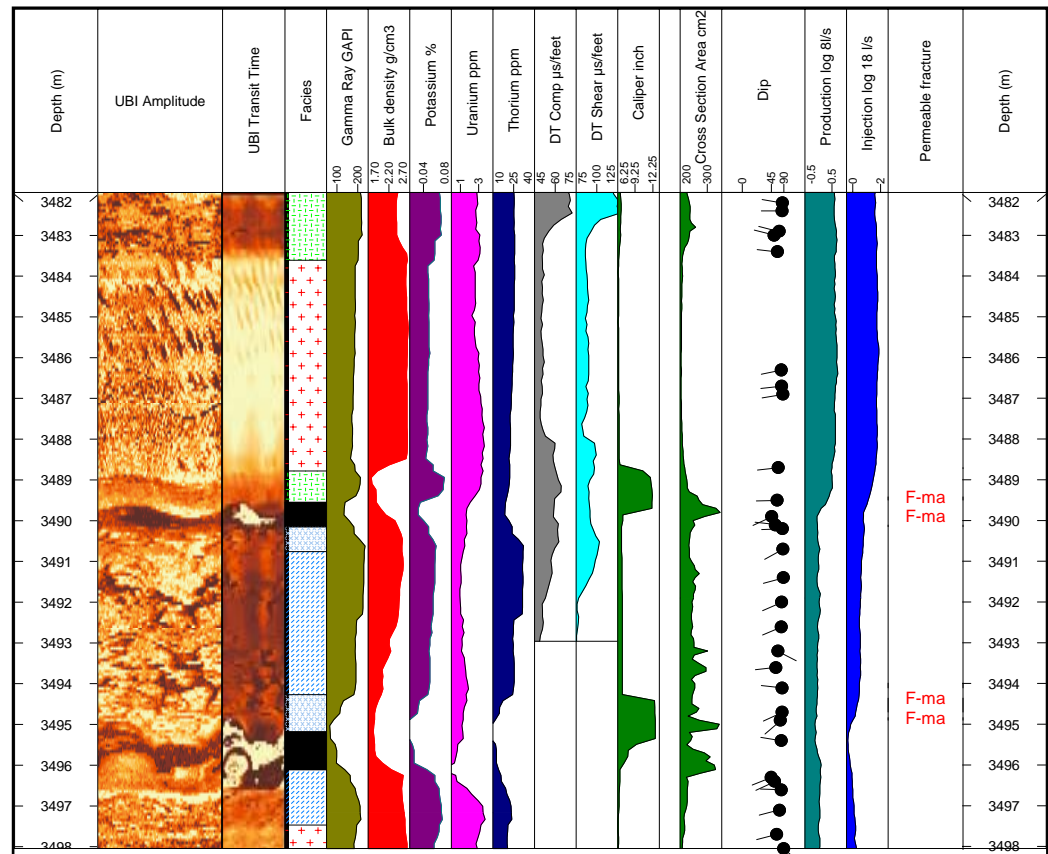
Secondary quartz deposition

High porosity

Brines 100g/L



Thin section - Fracture
Illite, calcite, hematite



Well GPK1, 3500 m

