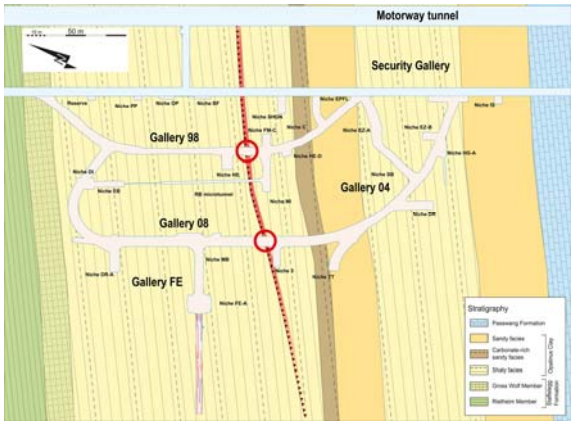
Guide

Mont Terri
Rock laboratory

10 Tectonic fractures, fault zone



Objective: Many tectonic fractures are forming a fault zone. Such a fault zone runs through the middle of the rock laboratory. It was formed around 6 million years ago, caused by tectonic thrusting during the folding of the Jura Mountains (layers of rock being forced on top of one another). The related displacements can easily be seen with the naked eye.

Procedure: Detailed mapping on scales of 1:10 to 1:1, boreholes, thin sections, petrographic analyses.

Results: The retention capabilities of the Opalinus Clay are also completely intact in the tectonic fault zones. Furthermore there is no water flowing here because the individual fault surfaces are sealed with calcite. However, in the search for suitable repository locations in the Opalinus Clay, emphasis is placed on fault-free layers. Therefore there will never be a storage facility in the folded Jura Mountains.

Start: 1998
End: Current. Faults are mapped after every excavation.
Project Partners: ENSI, NAGRA, swisstopo
Cost: CHF 5,000 per mapping exercise (without analyses)