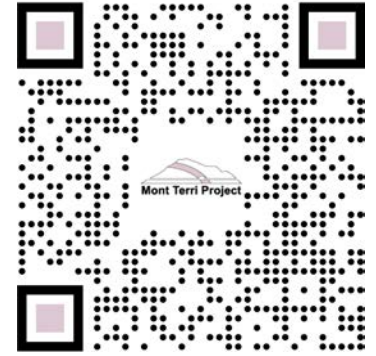
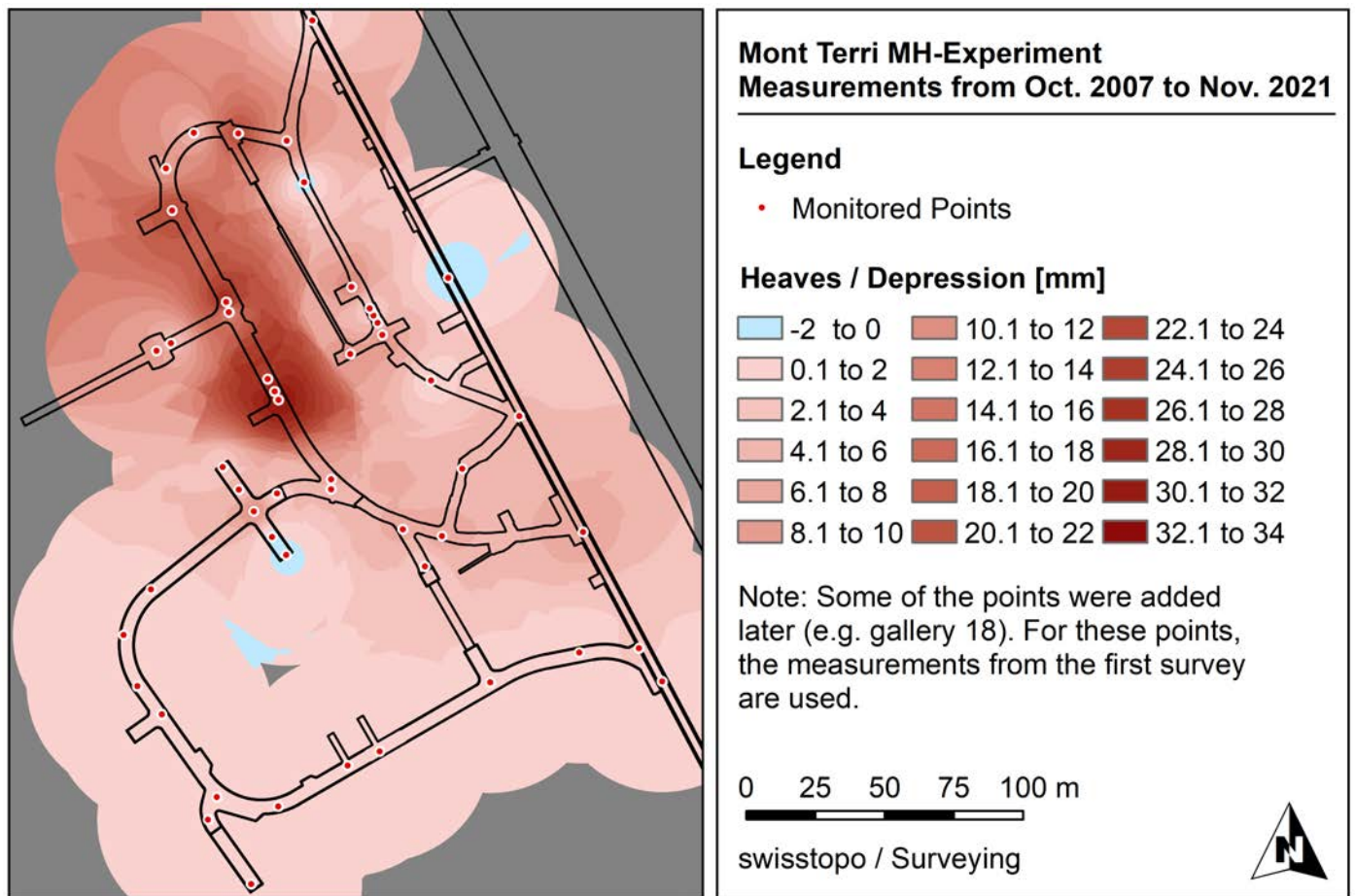


Mont Terri Project Underground Rock Laboratory



Report period: January 15–21, 2024

Assembled and edited by swisstopo, St-Ursanne



Spotlight of the week: The MH experiment has two main objectives: Long-term monitoring of the movement of the Opalinus Clay and to provide fixed points for the geo-referencing of the experiments and for further surveying. To do this, we measure changes in height, position and gravity in the rock laboratory, in the safety gallery and on the surface. In the diagram we can see that the ground is rising in almost all areas of the laboratory. In Ga08, some points in the floor have risen by more than 3 cm since construction. The points in Ga18 also show the first uplifts.

Important note

- On Wednesday and Thursday, January 24-25, the first international “Caprock Integrity & Gas Storage Symposium” will take place in the Visitor Center, including a lab visit on Thursday. We therefore have no additional capacity for work inside the rock lab. We are sorry for the inconvenience and thank you for your understanding.

CL (CO2LPIE-CO2 Long-Term Periodic Injection) experiment

- On Thursday, January 18, A. Eul, S. Braunschweig and F. Durulang (Eul GmbH) installed the drilling rig for BCL-5 while S. Schefer (swisstopo) oriented it in the right direction (327.5/33) (**Figure 1**).

CS-E (Mini-Fracturing and Sealing) experiment

- On Tuesday, January 16, S. Schefer (swisstopo) refilled the injection tank with A1 Pearson water. He also started the seismic acquisition nodes and the miniRuedi, remotely supported by A. Rinaldi (ETHZ).

PF-A (Progressive Evolution of Structurally-Controlled Overbreaks: Long-term monitoring, hydromechanical simulation and rock testing) experiment

- From Monday to Wednesday, January 15–17, A. Eul, S. Braunschweig and F. Durulan (Eul GmbH) installed the drilling rig in the MI Niche for BPF-A1 and drilled the borehole to its final depth of 8.1 m (**Figure 2**).
- From Tuesday to Wednesday, January 16–17, L. Winhausen (RWTH Aachen), R. Wang (WSL) and J. Windisch (swisstopo) did the core mapping and took some samples for determining water content and rock density. The samples were sealed in aluminium bags (**Figure 3**).
- On Thursday, January 18, M. Ziegler and J. Windisch (swisstopo) performed the OBI and gamma logging inside BPF-A1.

SW-A (Large-Scale Sandwich Seal in Opalinus Clay) experiment

- On Tuesday, January 16, T. Theurillat and S. Schefer (swisstopo) filled and pressurized the HPT of shaft 2. It will be checked for leaks until Thursday before switching the injection to the HPT.
- From Tuesday to Wednesday, January 16–17, H. Albers and T. Tietz (BGR) were on site to repair different broken ERT measuring boards from shaft 2. The repairs were done on the first day, test measurements followed over night and on Wednesday (**Figure 4**).
- On Thursday, January 18, T. Theurillat and F. Richert (swisstopo) switched the injection on shaft 2 from the LPT to the HPT. The injection pressure remains constant at 8 bar. At the same time they also refilled the HPT for shaft 1.

Varia

- On Tuesday, January 16, a team of the regional TV station Canal Alpha visited the lab and filmed a feature about CO₂ experiments that included interviews with the director of the Mont Terri Project C. Nussbaum (swisstopo).

Visits

Day	Date	Group Name	Group Size	Visitors Guide
Tue	16.1.2024	Canal Alpha TV	2	R. Wyss (swisstopo)
Sat	20.1.2024	Besuchstag NL	6	H. Sager (Nagra)

Figures



Figure 1: CL: Installation and orientation of the drilling rig (S. Schefer, swisstopo).



Figure 2: PF-A: Installed rig on BPF-A1 and drilling in tight space underneath the heater controllers of HE-E (J. Windisch, swisstopo).



Figure 3: PF-A: Geologists discuss their catch of the day (J. Windisch, swisstopo).



Figure 4: SW-A: Replacement and testing of the palatines for the ERT measurements (S. Schefer, swisstopo).