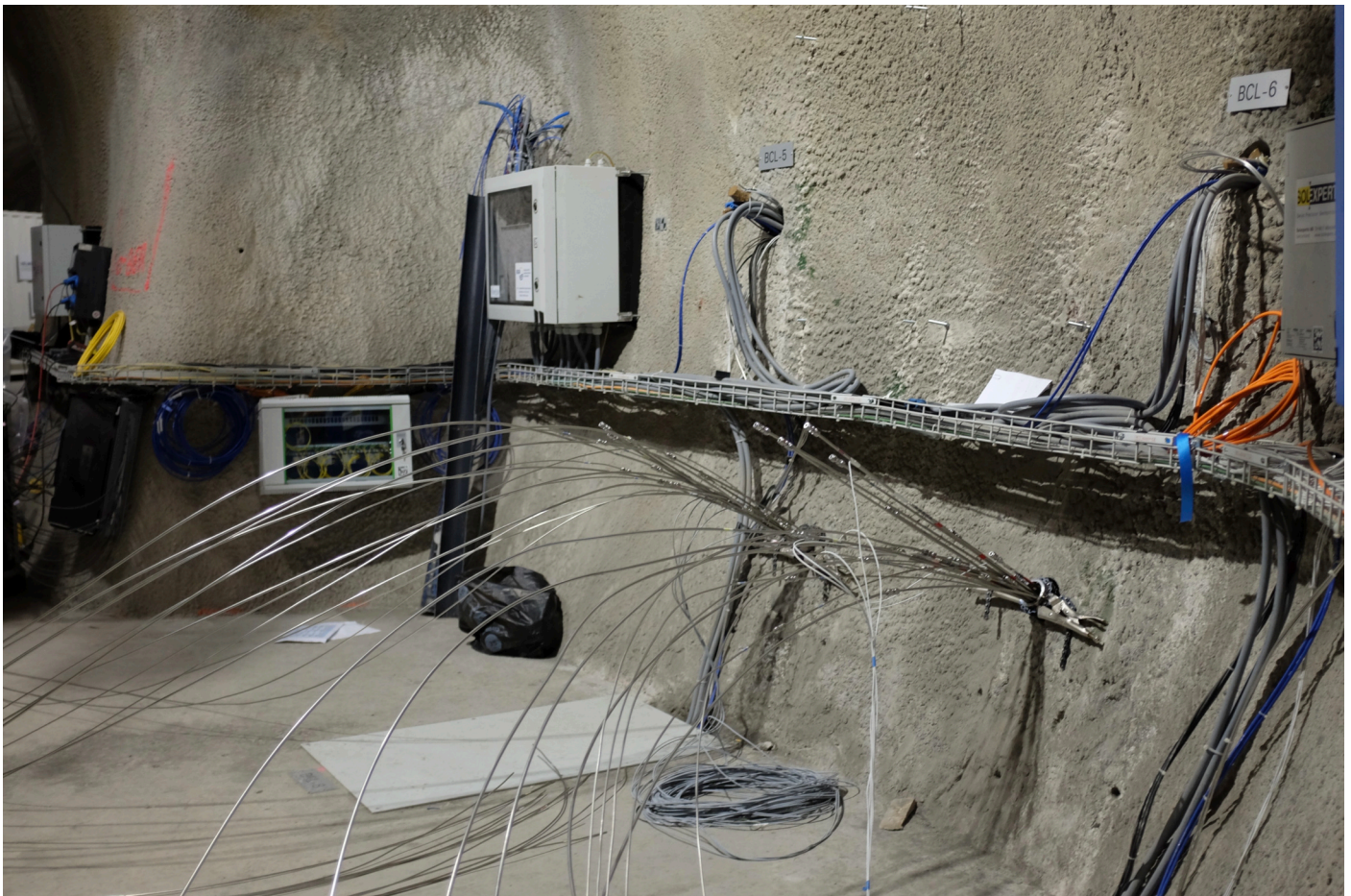
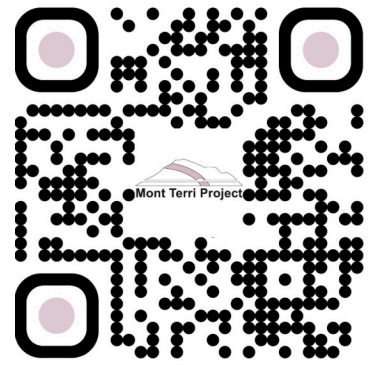


Mont Terri Project Underground Rock Laboratory

Report period: January 20–26, 2025

Assembled and edited by swisstopo, St-Ursanne



Spotlight of the week: Following up on last week's spotlight on the CL (CO₂ long-term periodic injection) experiment, we today present the initial stage of an injection and testing installation. In BCL-9 (on the left side) we will inject CO₂-saturated artificial pore water into two different intervals whereas the remaining three intervals act as monitoring intervals. An additional line into the injection intervals serves as steering line for a bypass valve in case of filter clogging. In BCL-10, on the other hand, all five intervals can be used for monitoring gas and water composition. Now all 42 steel tubes have to be connected to their corresponding interfaces (Photo: S. Schefer).

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

- On Monday, January 20, C. Marion(Eawag), P.X. Meury (Géo&Environnement), M. Abdelouhabi and D. Jaeggi (swisstopo) continued the core documentation, conditioning and core sampling of boreholes BCL-9 and BCL-10. The two boreholes were continued from 9.5 m to their final depth of 14.59 m (BCL-9) and 14.62 m (BCL-10).
- On Monday, January 20, A. Eul, S. Braunschweig and F. Durulan (Eul GmbH) drilled the two boreholes BCL-9 and BCL-10 to the final depth of 14.59 m and 14.62 m, respectively. Both boreholes were grinded to a planar bottom and cleaned up in the end.
- From Tuesday to Wednesday, January 21–22, the GmuG seismic transmission DAS was stopped to allow for BGR measurements and restarted again by M. Ziegler (swisstopo).
- From Tuesday to Wednesday, January 21–22, T. Burschil, R. Dlugosch and T. Tietz (BGR) conducted crosshole seismic measurements in BCL-09 and BCL-10. Seismic sensors of BCL-03 to BCL-08 were included to record the shots made between 8 m and 14.4 m along BCL-09 and BCL-10.
- On Tuesday, January 21, M. Ziegler and D. Jaeggi (swisstopo) conducted borehole optical loggings of BCL-09 and BCL-10, assisted by M. Abdelouhabi (swisstopo) and C. Marion (Eawag) (**Figure 1**).
- On Wednesday, January 22, M. Frädrich and J.-P. Bischoff (terratec) conducted BMR, DIL and SGR logging of BCL-09 and BCL-10 (**Figure 2**).
- From Thursday to Friday, January 23–24, J. Gisiger and A. Jakupi (Solexperts) installed the two multipacker systems into BCL-09 and BCL-10. With this final step, the downhole experiment setup was completed (**Figure 3**).

CS-E (Mini-Fracturing and Sealing) experiment

- On Thursday, January 23, A. Zappone, A. Rinaldi and P. Annan (ETHZ) installed an inline filter, and took miniRuedi measurements from the calibration bag, then from BSC-D2. The Mixing tank was cleaned and the tracer gas changed from Xe to Kr with CO₂. At the end, they switched the injection interval from BCS-D1 Q4 to BCS-D1 Q2 and performed a pulse test (**Figure 4**).

GT (Gas Transport Models and the Behavior of OPA to Gas Pressure) experiment

- On Thursday, January 23, A. Rinaldi (ETHZ) reinstalled the miniRuedi after a long-term maintenance.

MA-A (Modular Platform for Microbial Studies) experiment

- On Tuesday, January 21, M. Abdelouhabi (swisstopo) reactivated the reactor 1 circulation and flushed several times the main chamber in the MBraun glovebox to get back to an expected O₂ pressure lower than 1 ppm.
- On Thursday, January 23, M. Abdelouhabi (swisstopo) checked the O₂ level and deactivated the vacuum pump of the MBraun glovebox.

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- On Friday, January 24, S. Schefer, M. Abdelouhabi, P. Hayoz and T. Theurillat (swisstopo) received another 9 pallets from Hochdorf and Herznach to store into the new drillcore storage facility.

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

- On Friday, January 24, T. Theurillat (swisstopo) refilled the HPT connected to borehole BSW-A1.

Figures



Figure 1: CL: D. Jaeggi is excited about the upcoming OBI data (S. Schefer, swisstopo).



Figure 2: CL: The terratec team during the BMR-log (D. Jaeggi, swisstopo).



Figure 3: CL: Installation of the hydraulic multi-packer system for geochemical sampling and pore pressure monitoring at BCL-10 (M. Ziegler, swisstopo).



Figure 4: CS-E: The team from ETHZ is preparing the next miniRuedi measurements (S. Schefer, swisstopo).