Mont Terri Rock Laboratory

Field report: January 3–16, 2022 (Phase 27)

CS-E (Mini-Fracturing and Sealing) experiment
- On Thursday, January 13, L. Schwab (Solexperts) installed a CO$_2$-sensor that will produce an alarm light when the CO$_2$-concentration is above a threshold.

HS (Hydrogeological Survey of the Mont Terri Anticline) experiment
- On Thursday, January 6, D. Jaeggi (swisstopo) opened the valve of I2 for a long-term flushing exercise. The flow rate is in the order of 250 ml/min and initial conductivity was more than 10 mS/cm and is decreasing with time. Next week the valve will be closed again.
- On Wednesday, January 11, V. Regard and T. Steffen (swisstopo) cleaned the automatic measuring stations in the security gallery and retrieved the data.

HT (Hydrogen Transfer in Opalinus Clay) experiment
- On January 3 and 10, S. Schefer (swisstopo) took water samples for gas analysis.

PF (Progressive Failure) experiment
- Tuesday and Wednesday, January 11-12, M. Ziegler and S. Schefer (swisstopo) improved the active seismic survey installation with remote support from A. Obermann (SED) and J. Philipp (GmuG).
- On Thursday, January 13, M. Ziegler, T. Steffen and S. Schefer (swisstopo) performed active seismic measurements together with a geodetic survey (Figure 1).

SM-C (Permanent Nanoseismic Monitoring) experiment
- On Tuesday, January 11, S. Schefer (swisstopo) performed a maintenance mission at SNS-4 and removed the Centaur for repair.

SW-A (Large-Scale Sandwich Seal in Opalinus Clay) experiment
- On Monday, January 10, S. Schefer (swisstopo) with the remote assistance of H. Albers and M. Furche (BGR) temporarily repaired part of the ERT-system from shaft-1. H. Albers will come on site to replace parts inside one of the multiplexers.
- On Tuesday, January 11, D. Jaeggi (swisstopo) increased the injection pressure in Shaft 1 by another bar to 8.4 bar absolute at gallery level. The system performs well at an injection rate of about 0.5 l/day. Next pressure step will be done in two weeks and requires the switch from low pressure tank (LPT) to high pressure tank (HPT).

Varia
- On Monday, January 10, we welcomed Tim Steffen (Figure 2) as our new civil servant in Mont Terri. He has a BSc in Geology from ETHZ and will stay with us until the end of April. We are very happy for his support!
On Thursday, January 13, L. Schwab (Solexperts) replaced several Geomonitor PCs (LP-long-term, GRS-SB, FE-Geomonitor). He also replaced the computer of MA-A inside the cabinet in the niche. This mission was part of the yearly Geomonitor system maintenance.

D. Jaeggi and S. Schefer, January 16, 2022

Figure 1: PF: Geodetic survey of the seismic measurements (Photo: S. Schefer, swisstopo).

Figure 2: Varia: Tim Steffen will support us as civil servant (Photo: V. Regard, swisstopo).