Mont Terri Rock Laboratory

Field report: September 5–11, 2022 (Phase 28)

CD-A (Influence of Humidity on Cyclic and Long-Term Deformations) experiment

- On Tuesday, P. Maeder, T. Meister, and S. Schefer (swisstopo) measured heaves inside the Twin Niches again to see whether they learnt it well. Turns out they had a really good teacher. 😊
- On Friday, Q. Bobillier and N. Philippossian (Sigeom) performed laser scanning in the Twin Niches (Figure 1). This marks the 9th measurement since the construction of the niches and the first since the installation of the levelling fixpoints.

CS-E (Mini-Fracturing and Sealing) experiment

- On Friday, A. Rinaldi (ETHZ) installed the MiniRuedi with the new surface cabinet (Figure 2) that was installed at the same time by J. Gisiger (Solexperts).

DR-B (Long-Term Diffusion) experiment

- On Thursday, the scan of DR-B8 was successfully terminated and the probe taken out.

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

- On Friday, J. Gisiger (Solexperts) performed leakage test on the surface installation. Everything is tight.

MH (Long-Term Monitoring of Heaves and Displacement) experiment

- On Monday and Tuesday, S. Condamin, D. Ramos and S. Suero (swisstopo) measured the fixpoints outside the lab with the aim of a better precision and accuracy for the underground coordinates.
- They also re-installed the climatic data loggers inside the security gallery.

PF (Progressive Rock Mass Failure and Overbreak Sealing) experiment

- On Tuesday and Wednesday, M. Ziegler and T. Meister (swisstopo) reprogrammed the motor for the photogrammetry and started a new measurement (Figure 3).
- On Thursday and Friday, S. Schefer measured the fixpoints for the photogrammetry.
- On Thursday and Friday, P. Maeder and T. Meister adjusted the protective covers for the rails and re-installed them.

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

- On Monday, E. Lassnig, S. Zejeri, J. Zejeri and D. Durmisi (VSH) started the installation of the pressure chamber inside shaft 2 (BSW-A2). They levelled the floor with two component cement until 5 cm below the feeding borehole.
- On Wednesday, E. Lassnig and his team finished the levelling and with the help of S. Schefer lowered the pressure chamber into shaft 2 and finished the installation (Figures 4&5).
• On Wednesday, S. Schefer refilled the high pressure tank and replaced the nitrogen bottle at the injection.

Varia
• Next Tuesday, 13 September, 2022, the Scientific Symposium (25\textsuperscript{th} +1 anniversary and farewell of our former Mont Terri director Paul Bossart) takes place in Porrentruy. Please note that no lab work can be done on this day. We look forward to seeing you in Porrentruy!

Visits

<table>
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<tr>
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<tr>
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D. Jaeggi and S. Schefer, September 11, 2022

Figure 1: CD-A: Laser scanning inside Niche Open Twin (Photo: S. Schefer, swisstopo).
Figure 2: CS-E: A. Rinaldi is happy with the new installation! (Photo: S. Schefer, swisstopo).

Figure 3: PF: Finally we can do another photogrammetric survey inside BPF-7! (Photo: S. Schefer, swisstopo).
Figure 4: SW-A: Lowering the pressure cell (Photo: S. Schefer, swisstopo).

Figure 5: SW-A: The installation of the pressure chamber at 10 m depth is successfully completed! (Photo: S. Schefer, swisstopo).