Mont Terri Rock Laboratory

Field report: June 20–July 3, 2022 (Phase 27)

CS-E (Mini-Fracturing and Sealing) experiment
- On Tuesday, June 28, A. Zappone and A. Rinaldi (ETHZ) calibrated a new pH-sensor and performed some maintenance work on the injection cabinet (Figure 1).
- Additionally, A. Rinaldi and S. Schefer inspected borehole BCS-D7 with the camera to assess the possibility to retrieve the SIMFIP probe. The borehole is completely deformed and access with the camera was only possible until 7 m.

MH (Long-Term Monitoring of Heaves and Displacement) experiment
- On Monday, June 27, the PI S. Condamin (swisstopo) was on site to prepare the levelling campaign and to introduce S. Schefer into the measuring equipment.
- From Tuesday to Friday, June 28 to July 1st, A. Conz, D. Bachmann and S. Condamin (swisstopo) levelled the entire lab and the safety gallery until the ventilation cavern (Figure 2). During the measurements, S. Condamin also introduced S. Schefer and P. Maeder into the levelling techniques.

PF (Progressive Rock Mass Failure and Overbreak Sealing) experiment
- On Thursday, June 30, S. Schefer with the help of S. Condamin (swisstopo) geodetically measured 15 targets inside BPF-7 with high accuracy. These points will help to better define the photogrammetric models.
- On Friday, July 1st, A. Degiacomi and T. Nicollier (swisstopo) adjusted the cover for the rails inside BPF-7. With the fibre-optic installations, space got even more scarce.

SW-A (Large-Scale Sandwich Seal in Opalinus Clay) experiment
- From Tuesday to Friday, June 28 to July 1st, D. Fixar and D. Novotny (BGR) performed pneumatic tests on the shaft wall on the deepest 4.5 m of shaft 2 (Figure 3).
- On Tuesday and Friday, A. Degiacomi (swisstopo) refilled the high pressure tank with Pearson water.

Varia
- On Tuesday and Thursday, June 28 and 30, C. Oreja and C. Siegrist (GGT) measured the 3D-convergences inside Ga04 and Ga08.
- On Thursday, June 30, M. Ziegler and P. Maeder (swisstopo) underwent the formation for works in heights and shafts. They are now also ready for installations and measurements inside shaft 2.
- Information: The rock lab will be closed for summer break from July 18 until August 14.

D. Jaeggi and S. Schefer, July 2, 2022
Visits

- On Saturday, June 25, we welcomed over 200 visitors for the open day in the visitor center (Figures 4 and 5). The four planned slots across the day were evenly filled with around 50 persons each. This time, the majority of visitors came from the Canton of Jura.

<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Event Description</th>
<th>Participants</th>
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<tr>
<td>Tue</td>
<td>20.06.2022</td>
<td>DIVART, Delémont</td>
<td>20 R. Nicol</td>
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<tr>
<td>Wed</td>
<td>21.06.2022</td>
<td>Collège Thurmann, Porrentruy</td>
<td>36 R. Nicol, C. Boner</td>
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<td>Fri</td>
<td>24.06.2022</td>
<td>Terrainkurs der Uni Basel, Peter Jordan</td>
<td>28 D. Jaeggi</td>
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<tr>
<td>Fri</td>
<td>24.06.2022</td>
<td>Gymnasium Kirchenfeld, Bern</td>
<td>24 H. Sager</td>
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<td>Sat</td>
<td>25.06.2022</td>
<td>Open house day visitor centre and rock laboratory</td>
<td>200 C. Nussbaum, R. Nicol, M. Pretalli, A. De Giacomi, H. Sager</td>
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<td>Tue</td>
<td>28.06.2022</td>
<td>Sous-commission DFAE/DDPS de la Commission de gestion du Conseil des Etats</td>
<td>9 C. Nussbaum, D. Jaeggi, P. Senn</td>
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<td>Thu</td>
<td>30.06.2022</td>
<td>Ecole secondaire, Saignelégier</td>
<td>34 C. Boner, R. Nicol</td>
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<tr>
<td>Thu</td>
<td>30.06.2022</td>
<td>Ecole primaire, Courfaivre</td>
<td>41 R. Nicol, C. Boner</td>
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Figure 1: CS-E: A. Zappone and A. Rinaldi during the calibration (Photo: A. Degiacomi, swisstopo).
Figure 2: **MH:** Levelling inside the safety gallery has a certain star-wars-look… (Photo: Obi Wan Degiacomi, spacetopo).

Figure 3: **SW-A:** C. Fixar measures the positions for the pneumatic tests at the bottom of shaft 2 (Photo: S. Schefer, swisstopo).
Figure 4: Visits: R. Nicol with one of the visitor groups (Photo: A. Degiacomi, swisstopo).

Figure 5: Visits: C. Nussbaum explaining the Main Fault in Ga08 (Photo: A. Degiacomi, swisstopo).