Mont Terri Rock Laboratory

Field report: September 13–19, 2021 (Phase 27)

CD-A (Influence of Humidity on Cyclic and Long-Term Deformations) experiment
- On Monday, C. Ostertag-Henning (BGR) injected a Neon-pulse into the Closed Twin Niche. The following days until Friday he took gas samples in order to detect the diffusion of Neon through the door of the niche.

HS (Hydrogeological Survey of the Mont Terri Anticline) experiment
- On Tuesday, B. Hostettler, U. Menkveld (NMBE) and A. Reisdorf (Stiftung Ruhr Museum) examined the cores of BHS-1 for fossils and marked the spots for sampling (Figure 1).
- On Thursday, D. Jaeggi and S. Schefer (swisstopo) cut the marked samples to be sent to NMBE.

HT (Hydrogen Transfer in Opalinus Clay) experiment
- On Monday, Y. Lettry (Solexperts) and C. Ostertag-Henning (BGR) prepared the modifications for the new experiment phase and added a water sampling system (Figure 2).
- From Tuesday to Thursday, they were joined by A. Vinsot and M. Agnel (ANDRA) to start a new experimental phase in the Hydrogen Transfer (HT) experiment. This new phase consists in injecting D₂ (di-deuterium) in the HT borehole instead of H₂ that was injected over months during previous phases (from 2011 to 2015).
- The aim of this new phase is to check if the hypothesis regarding the hydrogen consumption processes occurring in the borehole are correct.

SW-A (Large-Scale Sandwich Seal in Opalinus Clay) experiment
- On Thursday, H. Albers (BGR) was on site to replace the multiplexers for the ERT. They were previously flooded by the water coming from the cables inside the shaft.

Varia
- On Wednesday, we welcomed M. Braun, the new CEO of Nagra in our lab. C. Nussbaum, D. Jaeggi (swisstopo) and O. Leupin (Nagra) showed him the important experiments and the new Ga18.

Visits

<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Location</th>
<th>Person(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tue</td>
<td>14.09.2021</td>
<td>Rotary Club Konolfingen</td>
<td>19 H. Hauser</td>
</tr>
<tr>
<td>Wed</td>
<td>15.09.2021</td>
<td>Matthias Braun, CEO Nagra</td>
<td>1 C. Nussbaum, D. Jaeggi, O. Leupin</td>
</tr>
<tr>
<td>Wed</td>
<td>15.09.2021</td>
<td>Bank J. Safra Sarasin Zürich, Dr. Marcel Jaeggi</td>
<td>8 D. Jaeggi</td>
</tr>
</tbody>
</table>
Figure 1: HS: Examining the cores of BHS-1 for fossils (Photo: V. Regard, swisstopo).

Figure 2: HT: C. Ostertag-Henning taking a water sample from the newly installed port (Photo: V. Schneider, swisstopo).