Mont Terri Project
Underground Rock Laboratory

Mont Terri Rock Laboratory

Field report: January 20-26, 2020 (Phase 25)

Distribution

Authorities

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Delegates of the Project Partners

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Principal Investigators and Experiment Delegates of Phase 25 experiments


Supporting Research Organisations

Paul Scherrer Institute PSI: S. Churakov, Th. Gimmi, M. Glauser, L. van Loon
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SHELL: N. Kampman, K. Bisdom

Project Management

Swisstopo: C. Nussbaum (Project Manager), T. Theurillat (Site Manager), S. Schefer (Dep. Site Manager), D. Jaeggi (Research Associate)
GGT: F. Burrus (Project Engineer), Th. Küttel, R. Daneluzzi
CS-D (CO$_2$: Studying Caprock and Fault Sealing Integrity) experiment
- On Wednesday A. Rinaldi (ETHZ) worked with the mini Ruedi mass spectrometer.

DR-B (Long-Term Diffusion) experiment
- On Thursday, S. Schefer (swisstopo) started a new scan in BDR-B8 borehole.

FE (Full Scale Emplacement) experiment
- On Wednesday, O. Harti and A. Sanchez (Amberg) did maintenance work on the heaters.

FS-B (Imaging the Long Term Loss of Faulted Host Rock Integrity) experiment
- From Monday to Tuesday, R. Schostak, H.W. Sassmannshausen, G. Meister and H. Bauek (Schützeichel) finished drilling BFS-B2 to its final depth of 55 m (diameter 141 mm). On Wednesday they installed for BFS-B1 and will start drilling next Monday.
- P.X. Meury (Géo et Environnement) and B. Schöni (swisstopo) performed the geological core documentation of BFS-B2. C. Nussbaum and D. Jaeggi (swisstopo) inspected the core and defined the position of the five test intervals for the future injection. They are set across the Main Fault (hangingwall and footwall) from intact rock (not fractured) to the fault core and again in the intact rock.
- On Tuesday, G. Müllebach (Terratec) logged BFS-B2 with OPTV, Dual Induction Log, spectral gamma and caliper.
- From Wednesday to Friday, J. Gisiger, L. Schwab and M. Bosskardt (Solexperts) installed the casing in BFS-B2 with the 5 intervals set for injection (Figure 1). They cemented the annulus between the casing and the rock.
- On Wednesday, A. Rinaldi and M. Kakurina (ETH) came to support Solexperts on the installation behind casing fiber optics in BDF-B2 for strain measurements.

HE-E (In-Situ Heater Eperiment on Key THM Processes and Parameters) experiment
- From Monday to Thursday, O. Harti and A. Sanchez (Amberg) did maintenance work on the heaters. They exchanged the Screen on PC1, installed a new Amman data interface and changed the heaters into automatic mode again.

PF (Progressive Evolution of Structurally Controlled Overbreaks) experiment
- On Wednesday, M. Lukovic (ETHZ) came on site to perform laser scan of the niche MI and entrance of the VE microtunnel for the planning of the new PF-boreholes in the rear end of the MI niche.

MB-A (MineByTest 2018 Hydromechanic characterization of the sandy facies) experiment
- On Tuesday, U. Noack and H. Albers (BGR) performed seismic (IVM) measurement in BMB-A2 and BMB-A3 (Figure 2).

SW-A (Large Scale Sandwich Seal in Opalinus Clay) experiment
- From Monday to Wednesday, the PI K. Wieczorek, J. Gose, M. Komischke and B. Zehle (GRS) drilled the remaining mini-piezometer boreholes and installed the piezometers (Figure 3).
- On Wednesday, U. Noack and H. Albers (BGR) performed IVM measurements in the BSW-B-boreholes.
Varia

- Next week, Wednesday and Thursday, the Technical Meeting TM38 will take place in Porrentruy. We expect ca. 200 participants and look forward to seeing you and having interesting discussions and presentations!

C. Nussbaum, D. Jaeggi and S. Schefer, January 25, 2020

Visits

| Wed  | 22.01.2020 | SAC Basel       | 27 | G. Fiedler |

Figure 1: FS-B: The team from Solexperts during the grouting of BFS-B2 (Photo S. Schefer, swisstopo).
Figure 2: **MB-A:** U. Noack and H. Albers during the IVM measurements. (Photo: D. Jaeggi, swisstopo).

Figure 3: **SW-A:** The team from GRS drilling the replacement borehole BSW-B5a (Photo: D. Jaeggi, swisstopo).