



# Mont Terri Project

## Underground Rock Laboratory

ANDRA BGR CHEVRON CRIEPI DOE ENRESA ENSI FANC GRS HELMHOLTZ IRSN JAEA NAGRA NWMO OBAYASHI RWM SCK•CEN SWISSTOPO TOTAL

## Mont Terri Rock Laboratory

Field report: January 7–13, 2019 (Phase 24)

### Distribution

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#### Principal Investigators and Experiment Delegates of Phase 24 experiments

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#### Project Management

Swisstopo: C. Nussbaum (Project Manager), T. Theurillat (Site Manager), S. Schefer (Deputy Site Manager), D. Jaeggi (Research Associate)  
GGT: F. Burrus (Project Engineer), Th. Küttel, R. Daneluzzi

## **Construction of Gallery 18**

- The excavation continued along Gallery18 and reached GM\_170 by Friday, January 11. There will be no excavation for the next two weeks due to renovation works to be done in the existing lab.

## **CI (Cement-Opalinus Clay Interaction) experiment**

- On Tuesday, January 8, J. Gisiger, K. Kontar (Solexperts) and U. Mäder (University of Bern) partially dismantled the two instrument cabinets. Flow lines stayed connected but data monitoring is discontinued during renovation work at the HE-D niche and MI niche by the tunneling company RL.

## **CI-D (Diffusion across 10-Year Old Concrete/Claystone Interface) experiment**

- On Tuesday, January 8, J. Gisiger, K. Kontar (Solexperts) and U. Mäder (University of Bern) stopped the circulation, disconnected the cabinet and then moved it to clear HE-D niche for maintenance work on the shotcrete reinforcements. The interval and packer lines were frozen (**Figure 1**), then capped. Some were later re-connected in the large wellhead of BCI-D1 and connected to pressure sensors to continue the data acquisition.

## **CS-D (CO<sub>2</sub>: Studying Caprock and Fault Sealing Integrity) experiment**

- On Thursday, January 10, Q. Wenning, A. Zappone and M. Grab (ETHZ) tested the passive seismic measuring system. Further, they prepared some modifications on the passive seismic instruments that will be installed next week.

## **DR-B (Long-Term Diffusion) experiment**

- On Friday, January 11, M. Jaquenoud (Nagra) continued repairing the XRF-probe (**Figure 2**).

## **FS-B (Imaging the Long Term Loss of Faulted Host Rock Integrity) experiment**

- From Monday to Thursday the drilling company GeoSonic drilled borehole BFS-B6. The borehole has a final length of 50 m. On Friday, they started BFS-B7 and reached 2 m by lunchtime.
- On Thursday afternoon, D. Fischer (Terratec GMBH) logged the interior of borehole BFS-B6.
- On Thursday evening, J. Gisiger and L. Schwab (Solexperts) installed the fibre-optic cables into borehole BFS-B6 with the help of S. Schefer (swisstopo) who controlled the fibre-optic signal and cemented it on Friday.

## **Varia**

- On Thursday, January 17, a media event organized at the initiative of SED (Swiss Seismological Survey, ETH Zürich) will take place in the visitor center and the rock laboratory. The main aim is to present to the media the CS-D experiment and explain how this experiment can contribute to the CCS research in Switzerland. Swiss TV (German and French) and some of the key newspapers in Switzerland have already confirmed their intention to participate to the event. The operator swisstopo and the ETH will guide the journalists into the rock lab and give some interviews. More details in the next weekly report.
- On Monday, January 7, J. Obrecht started his civil service on the Mont Terri (**Figure 3**). He previously finished his bachelor in Environmental Sciences at University of Lausanne. He will stay with us until February 21.

## Visits

Day	Date	Number of persons	Name of the group	Guide
Fri	11.01.2019	4	Norbert SA, Géologues-conseils ( <b>Figure 4</b> )	S. Schefer

C. Nussbaum, D. Jaeggi, S. Schefer and R. Raselli, January 11, 2018



**Figure 1: CI-D:** The freezing of interval and packer lines in the HE-D Niche in preparation for the cutting of the lines (Photo: U. Mäder, University of Bern).



**Figure 2: DR-B:** M. Jaquenoud (Nagra) checking the motors of the XRF-Probe (Photo: R. Raselli, swisstopo).



**Figure 3: Varia:** J. Obrecht started his civil service on the Mont Terri (Photo: R. Raselli, swisstopo).



**Figure 4: Visits:** The company Norbert SA, Géologues-conseils visited the Ga18 construction site together with their guide S. Schefer (swisstopo) to learn about ShapeMetrix and the processing of 3D models (Photo: R. Raselli, swisstopo).