



# 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: September 24<sup>th</sup> – September 30<sup>th</sup> 2018 (Phase 24)

### Distribution

#### Authorities

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#### Delegates of the Project Partners

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RWM: S. Thompson  
SCK•CEN: C. Bruggeman  
Swisstopo: A. Möri  
TOTAL: A. Brisset

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

ANDRA (E. Huret, G. Armand, A. Albrecht, J. Delay, Y. Linard, S. Necib, A. Vinsot, P. Henocq), BGR (K. Schuster, J. Massmann, S. Costabel, W. Graesle, C. Ostertag-Henning, H. Shao, A. Schippers, J. Hesser, T. Kneuker, G. Ziefle, D. Rebscher), CHEVRON (R. Ewy, H. Goodman), CRIEPI (T. Oyama, S. Yokoyama), DOE (P. Nair, J. Birkholzer, J. Rutqvist, Y. Guglielmi), ENRESA (J.C. Mayor), ENSI (M. Herfort, B. Graupner, J. Hansmann, E. Saraiva, M. Sentis), FANC (F. Bernier, P. De Cannière, B. Guiot, G. Pochet, M. Surkova), GRS (K. Wieczorek, O. Czaikowski), Helmholtz (M. Kuehn, S. Lueth, A. Cherkouk, A. Vieth), IRSN (J.-M. Matray, C. Wittebroodt, P. Dick), JAEA (K. Tanai, K. Aoki), NAGRA (O. Leupin, J. Becker, N. Diomidis, F. Kober, D. Traber, B. Garitte, V. Cloet, L. Cantieni, S. Giger, N. Giroud, G. Deplazes, S. Koehler, A. Reinicke), NWMO (L. Kennell-Morrison, S. Briggs, H. Kasani, K. Birch, J. Binns, P. Keech, T. Yang), OBAYASHI (M. Fukaya, Y. Kimura), RWM (S. Thompson, S. Norris, R. McLaverty, R. Hibberd, M. Bailey, J. Pearson, M. Cowley, H. Paireudeau), SCK•CEN (C. Bruggeman, D. Jacques, M. De Craen, N. Bleyen, N. Maes), Swisstopo (A. Moeri, P. Bossart, C. Nussbaum, D. Jaeggi, C. Minnig, S. Schefer), TOTAL (A. Brisset)

#### Supporting Research Organisations

Paul Scherrer Institute PSI: S. Churakov, M. Glaus, Th. Gimmi, L. van Loon  
ETHZ: S. Löw, M. Ziegler, S. Wiemer, A. Zappone  
EPFL: L. Laloui, R. Bernier-Latmani, M. Violay, B. Lecampion

#### 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

- Niche 2 has been finished by Thursday, September 28.
- The excavation now continues on Gallery18 and reached GM\_72.5 by Friday, September 28.

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

- From Wednesday to Friday, September 26–28, the drilling company GeoSonic drilled borehole BCS-D5 down to a depth of 9.20 m.
- On Thursday and Friday, September 27–28, M. Lukovic (ETHZ) continued with the logging and scanning of drillcores of BCS-D5. She also packed the samples, preparing them for shipment. M. Grab (ETHZ) was on site on Thursday testing the geophysical equipment.

### MB-A (MineByTest 2018 Hydromechanic Characterization of the Sandy Facies before and during Excavation) experiment

- From Monday to Wednesday, September 24–26, the M. Komischke and B. Zehle (GRS) finished borehole BMB-A16. In the following, piezometers were installed in borehole BMB-A16.
- From Monday to Wednesday, F. Schulte and U. Nowak (BGR) continued with interval velocity measurements (IVM) and electrical resistivity tomography (ERT) measurements in BMB-A2 and BMB-A3 (**Figure 1**).
- From Wednesday to Friday, T. Tietz und H. Albers (BGR) conducted geophysical mini-seismic measurements, geo-electric measurements and cross-hole measurements in boreholes BMB-A2 and BMB-A3.

### SI-A (Seismic Imaging Ahead of and Around Underground Infrastructure) experiment

- From Wednesday to Friday, S. Lueth and A. Jurczyk (GFZ) equipped boreholes BSI-A1 to BSI-A4 with 2 m long custom made anchors. The remaining boreholes will be drilled next month.

### Varia

- On Tuesday, September 25, the Mont Terri team conducted its annual fire drill.

### Visits

| Day | Date       | Name of the Group  | Visitors | Guides                    |
|-----|------------|--|----------|---------------------------|
| Wed | 26.09.2016 | Fraternity Murmatthaus Lucerne                                   | 12       | G. Fiedler                |
| Fri | 28.09.2018 | Enterprise Francis Beuchat Sàrl                                  | 15       | M. Pretalli               |
| Sat | 29.09.2018 | <b>International symposium for energy geotechnics (Figure 2)</b> | 39       | P. Bossart<br>C. Nussbaum |



**Figure 1: MB-A:** F. Schulte (BGR) conducting interval velocity measurements (IVM) and electrical resistivity tomography (ERT) measurements (Photo: S. Schefer, swisstopo)



**Figure 2:** Visit of the rock lab in the framework of the International Symposium on Energy Geotechnics (SEG-2018) (Photo: O. Reiser, swisstopo)