

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: October 1st – October 7th 2018 (Phase 24)

Distribution

Authorities

Swisstopo: P. Bossart, O. Lateltin
BfE: M. Stauffer, Ph. Schaub
RCJU: P. Mertenat, Th. Flüeler, M. Giamboni, J. Fernex, J. Chapatte, A. Herrmann
EC: Ch. Davies

Delegates of the Project Partners

ANDRA: E. Huret
BGR: K. Schuster
CHEVRON: R. Ewy
CRIEPI: T. Oyama
DOE: P. Nair, J. Birkholzer
ENRESA: J.C. Mayor
ENSI: M. Herfort
FANC: F. Bernier
GRS: K. Wieczorek
Helmholtz: M. Kühn
IRSN: J.-M. Matray
NAGRA: O. Leupin
NWMO: L. Kennell-Morrison
JAEA: K. Tanai
Obayashi: M. Fukaya
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. Pairedeau), 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

- The excavation continued along Gallery 18 and reached GM_82.0 by Friday, October 5. The first layer of concrete on the invert from GM_00 until GM_82 was emplaced on Friday afternoon.
- Starting from next Monday, the different sections of the TS-experiment will be excavated. Experiment requirement is a constant excavation rate (2 m/day).

CS-D (CO₂: Studying Caprock and Fault Sealing Integrity) experiment

- From Monday to Thursday, October 1–4, the drilling company GeoSonic drilled borehole BCS-D5.
- On Thursday, October 4, G. Mühlebach (Terratec Geophysical Services) performed borehole logging on borehole BCS-D5. He ran 4 probes measuring optical borehole imaging, natural gamma ray, caliper and density log.
- On Thursday and Friday, October 4–5, J. Gisiger and L. Schwab (Solexperts) installed an extensometer in borehole BCS-D5 under the supervision of A. Zappone and M. Grab (ETHZ).
- On Friday, October 5, the drilling company GeoSonic started drilling borehole BCS-D2 dedicated for fluid sampling during the CO₂ injection.
- From Monday to Friday, October 1–5, M. Lukovic and Q. Wenning (ETHZ) continued with the logging and scanning of drill cores from boreholes BCS-D5 and BCS-D2.

FE-M (Long-term Monitoring of the Full-Scale Emplacement Experiment) experiment

- On Thursday, October 4, B. Firat-Lüthi (Nagra) conducted the KD2 and PR2 measurements. Further, she refilled the calibration bath of the FE-M experiment.

MB-A (MineByTest 2018 Hydromechanical Characterization of the Sandy Facies) experiment

- On Monday, October 1st, T. Tietz und H. Albers (BGR) continued and completed the geophysical mini-seismic measurements, geo-electric measurements and cross-hole measurements in boreholes BMB-A2 and BMB-A3. Now the mine-by test is fully installed and zero measurements have been completed.

Visits

Day	Date	Name of the Group	Visitors	Guides
Mon	01.10.2018	Individual Entrepreneur „Kalugin“ (Russia)	4	P. Bossart
Tue	02.10.2018	Swiss Federal Finance Commission	1	P. Bossart
Wed	03.10.2018	Honorary members of the ACJG	14	M. Pretalli
Thu	04.10.2018	Pupils of the HBLA Ursprung (Austria)	25	L. Oesch / G. Fiedler
Thu	04.10.2018	Cantonal school Büelrain, Winterthur	23	L. Oesch / G. Fiedler
Fri	05.10.2018	ABB Research Centre, theoretical physics	9	C. Nussbaum
Fri	05.10.2018	Swin Golf	14	M. Pretalli
Sat	06.10.2018	Lions Club, Val-de-Travers	18	M. Pretalli



Figure 1: CS-D: The team of GeoSonic drilling borehole BCS-D5 (Photo: S. Schefer, swisstopo)

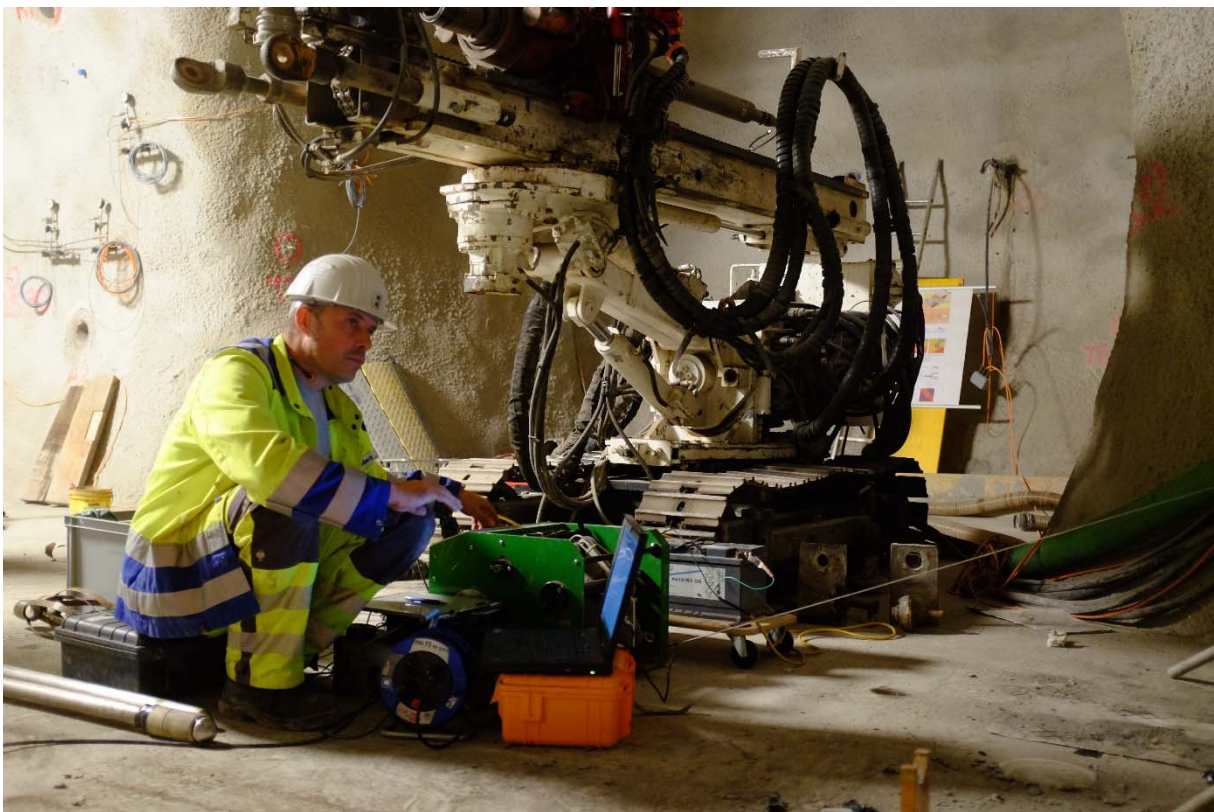


Figure 2: CS-D: G. Mühlebach (Terratec Geophysical Services) performing the borehole logging on borehole BCS-D5 (Photo: S. Schefer, swisstopo)