

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 28 – February 03, 2019 (Phase 24)

Distribution

Authorities

Swisstopo: P. Bossart, O. Lateltin
BfE: M. Stauffer, Ph. Schaub
RCJU: P. Mertenat, Th. Flüeler, M. Giamboni, J. Fernex, 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

- Excavation in Ga18 continued and reached GM178 by Wednesday. From there, we started with Niche 5 and reached NM2.0 by Friday (**Figure 1**).

CI-D (Diffusion Across 10-Year Old Concrete/Claystone Interface) experiment

- On Friday, February 1st, U. Mäder (University of Bern), L. Schwab and K. Kontar (Solexperts) moved the CI-D cabinet back to its original location in the HE-D niche (**Figure 2**).

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

- From Monday to Wednesday, S. Tuñon, O. Harti and V. Uceta (Amberg) performed the yearly maintenance on the heaters and the computers in the FE-A-Niche.

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

- On Thursday and Friday, M. Robertson (LBNL) started the maintenance work on the SIMFI-probe and measured the fibre optic cables in the five geophysical boreholes BFS-B3 to BFS-B7 (**Figure 3**).

HE-E (In-situ Heater Experiment on Key THM Processes and Parameters) experiment

- From Monday to Wednesday, S. Tuñon, O. Harti and V. Uceta (Amberg) performed the yearly maintenance on the heaters and the computers in the newly renovated MI-Niche.

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

- From Tuesday to Thursday, M. Grab (ETHZ) was on site to install seismic sensors for the passive seismic logging in borehole BCS-D5. Further, he performed a second session of baseline measurements.

Varia:

- N. Dietler has fulfilled his civil duty at the Mont Terri and will now leave us for another civil service project in Zurich. We thank him for his work and wish him all the best!
- From Monday to Friday, T. Theurillat (swisstopo) with the help of Ph. Vermot (independant) re-established the original state of the installations in the renovated part of the existing lab.

Visits

Day	Date	Number of persons	Name of the group	Guide
Thu	31.01.2019	1	Reuters TV, reconnaissance visit	C. Nussbaum
Thu	31.01.2019	15	DGRRF Workshop / ENSI	P. Bossart, M. Rahn

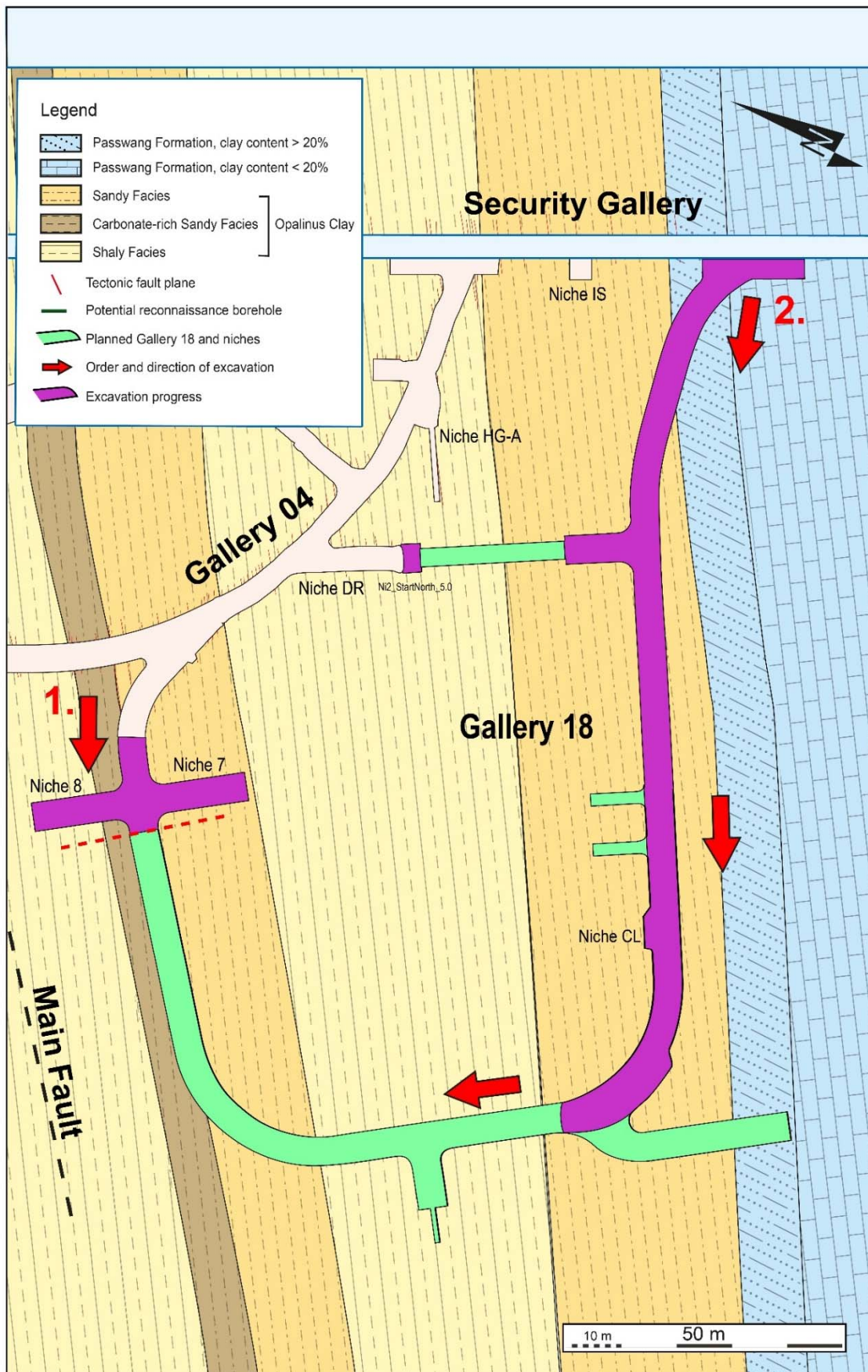


Figure 1: Gallery 18: Excavation status on 30.01.2019, Gallery Meter GM178.



Figure 2: CI-D: U. Mäder (University of Bern) and the team from Solexperts relocating the CI-D cabinet to its original location in niche HE-D (Photo: R. Raselli, swisstopo).



Figure 3: FS-B: M. Robertson (LBNL) measuring and controlling if the fiber optic cables installed behind casing in the five inclined geophysical boreholes BFS-B3 to BFS-B7 are working properly. They do. (Photo: R. Raselli, swisstopo).