

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 10th – September 16th 2018 (Phase 24)

Distribution

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RWM: S. Thompson
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TOTAL: A. Brisset

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Project Management

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GGT: F. Burrus (Project Engineer), Th. Küttel, R. Daneluzzi

Construction of Gallery 18

- The excavation reached GM67 on Wednesday, September 12th. The excavation took entirely place in the upper sandy facies of the Opalinus Clay, where sandy lenses and accumulations of carbonate biodetritus are abundant. Furthermore large scale (30 cm diameter) calcareous concretions are common in this part of the upper most Opalinus Clay.
- Thursday and Friday the excavation of Niche 2 was started and NM6.0 was reached (partial excavation) (**Figure 1**).

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

- On Monday, September 10th, the drilling company GeoSonic finished the drilling of borehole BCS-D6. On Tuesday morning, the borehole was logged by G. Mühlebach (Terratec geophysical services) and subsequently the installation of DTS fiber optical cables and a geophone string attached to PVC casing down to a depth of 36.65 m was planned. However, the operation had to be postponed due to technical problems. On Wednesday afternoon finally the installation was completed successfully. On Friday a trench for the monitoring cables was cut into the invert by Zuber SA. Cementation of the installation is planned for next Monday and will be carried out by Solexperts.
- On Tuesday, September 11th, GeoSonic drilling team started with the next borehole BCS-D3. This borehole is inclined by -45° and will be drilled with 131 mm diameter down to a depth of 30 m. Friday afternoon the borehole reached a depth of 12 m and will be continued next week.
- From Monday to Friday, September 10th – 14th, M. Lukovic and Q. Wenning (ETHZ) continued with the logging and scanning of drillcores of the CS-D experiment (**Figure 2**). They are working with the new core scanner CoreScan³ from DMT. This optical core scanner was purchased by swisstopo and will be available for the future drilling projects at Mont Terri.

FE-G (Monitoring the Gas Composition with the Full-Scale Emplacement) experiment

- On Wednesday, September 12th, Y. Tomonaga (Eawag) replaced the broken computing unit connected to the gas monitoring system at the FE experiment. The new unit, running the most recent software control suite for the installed mass spectrometer, has been configured and tested successfully on-site.

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

- From Tuesday to Thursday, September 11th – 13th, the drilling team from BGR drilled BMB-A3 and reached a final depth of 21.27 m on Thursday. The borehole has a diameter of 131 mm. The platform on which they drilled was dismantled on Friday by Zuber SA. Monday BGR drilling team will install the drill rig at BMB-A2, which is a dipping borehole just below BMB-A3. The two boreholes are dedicated to geophysical monitoring with electrical resistivity tomography (ERT) and interval velocity measurements (IVM). These measurement will start next week. (**Figure 3**).

Visits

Day	Date	Name of the Group	Visitors	Guides
Mon	10.09.2018	HE-Arc/FHNW Economie de l'Arc jurassien	48	A. Lambert / G. Fiedler
Tue	11.09.2018	Forestry enterprise Bülach	18	L. Oesch / G. Fiedler
Tue	11.09.2018	University of Stuttgart, Department LH2	22	M. Rahn
Wed	12.09.2018	National Institute of Technology, Fukushima College	4	D. Jaeggi
Wed	12.09.2018	Pensioners group Warteck & Feldschlösschen + trainees swisstopo	16	T. Thöni / G. Fiedler / R. Raselli
Thu	13.09.2018	International Lyceum Club Zurich	20	G. Fiedler
Fri	14.09.2018	Mens gymnastics Wohlenschwil	14	G. Fiedler
Fri	14.09.2018	Swiss Federal Nuclear Safety Inspectorate (ENSI)	2	P. Bossart
Fri	14.09.2018	Pensioners ceramic industry Laufen	26	P. Senn / G. Fiedler
Sat	15.09.2018	Mens gymnastics Flawil	22	P. Bossart
Sat	15.09.2018	Matura meeting year 1976 Kollegi Schwyz	14	P. Bossart

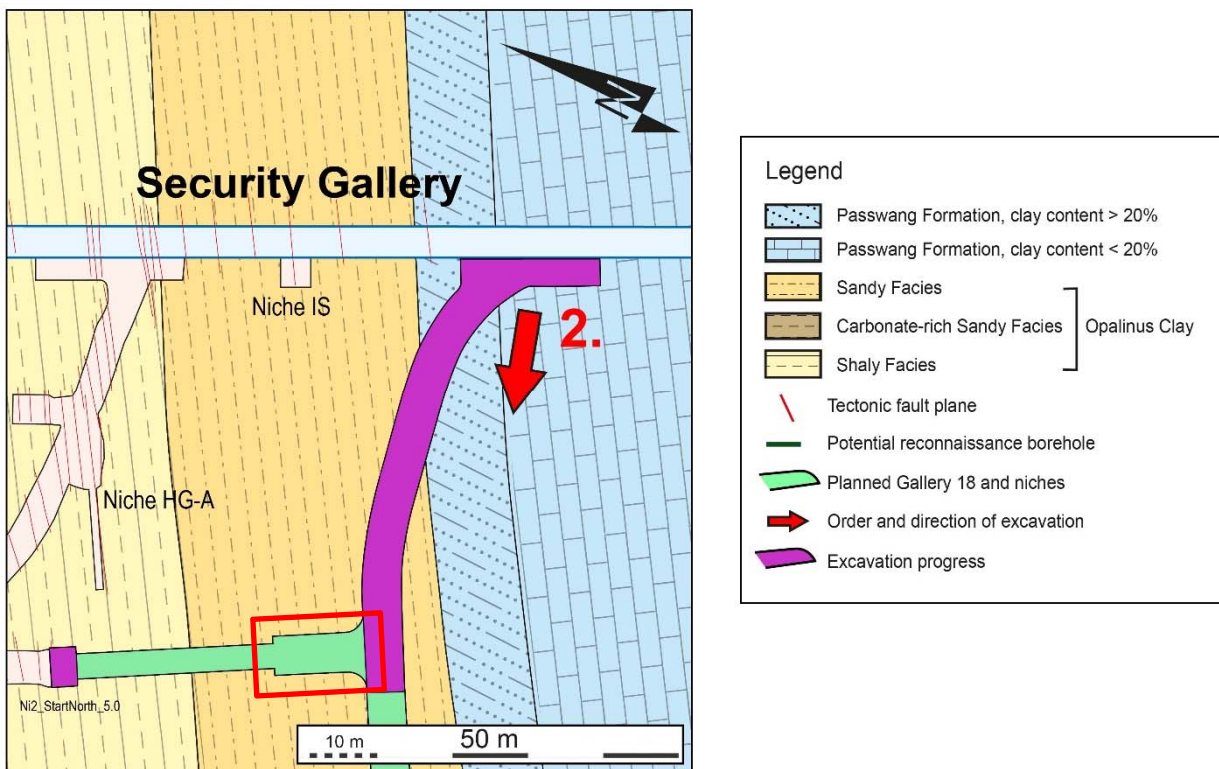


Figure 1: Map of the Security Gallery and parts of Gallery 18. The progress of the excavation is marked in purple. Gallery 18 reached GM67 and the excavation will now continue on the south part of Niche 2 (red rectangle).



Figure 2: CS-D: M. Lukovic (I.) and Q. Wenning (ETHZ) preparing a drillcore for the CoreScan³ core scanner. This new device of swisstopo is able to make high resolution core photos and HD 3D-models of any drillcore (Photo: S. Schefer, swisstopo).



Figure 3: MB-A: The team from BGR working on borehole BMB-A3 (Photo: R. Raselli, swisstopo).