

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: July 2nd – July 8th 2018 (Phase 24)

Distribution

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

Construction of Gallery 18

- The excavation of Ga18 started from Niche 1 and reached about 15 m by Friday, July 6th. This is measured from the security gallery axis, so about 10 m of effective progress.

CI-D (Diffusion across 10-year old Concrete/Claystone Interface) Experiment

- On Tuesday, July 3rd, K. Kontar (Solexperts) carried out some modifications of the surface cabinet in preparation for the saturation of intervals (**Figure 1**). On Friday, July 6th, U. Mäder (University of Bern) and K. Kontar performed some system tests with slight vacuum and slight gas overpressure. Further, the test interval located in concrete (OPC) was saturated with a synthetic high-pH pore solution by means of the circulation system implemented in the surface cabinet. Following this, the monitoring interval located nearby in OPA was also saturated, with a location-specific synthetic OPA pore water. It is expected to start fluid circulation next Tuesday.

GC-A (Characterization of EDZ development (focus “Sandy Facies”)) experiment

- From Monday to Tuesday, July 2nd – July 3rd, the drilling company Schützeichel drilled borehole BGC-A1 in the pre-Niche North of Niche 2 (**Figure 2**). BGC-A1 was drilled with a dip of -32.5° in the axis of the future Niche 2. They reached a depth of 15.2 m with a diameter of 86 mm.
- On Tuesday, July 3rd, the company Polymetra conducted a borehole-deviation-measurement with a gyro-probe. On Wednesday, they installed and cemented a 4-fold multi-piezometer system in borehole BGC-A1. The system is dedicated to the monitoring and survey of pore water pressure evolution during the excavation of Niche 2.

GD (Analysis of Geochemical Data) experiment

- On Friday, July 6th, Urs Mäder took the last sample from BCI-4, located in OPA. This sample of 5 ml was collected in a period of 4 weeks in a pre-acidified syringe to avoid issues with carbonate precipitation during sampling. All samples from this year will now be analyzed at the Institute for Geological Sciences, University of Bern.

MB-A (Hydromechanical Characterization of the Sandy Facies before and during Excavation) experiment

- The drilling company GeoSonic finished borehole BMB-A7 and reached a depth of 41.55 m with a diameter of 86 mm. The drill rig has been positioned at future borehole BMB-A5 on Tuesday, July 2nd.
- On Monday, July 1st, the BGR drilling team finished borehole BMB-A11 by reaching a depth of 21.3 m long. From Wednesday to Friday, July 4th – 6th, BGR drilled borehole BMB-A12 to a depth of 20 m. Both boreholes have a diameter of 86 mm.
- On Tuesday, July 3rd, Solexperts installed an inclinometer in borehole BMB-A7 and an extensometer in BMB-A11 (**Figure 3**). The cementation was carried out on Wednesday, July 4th. On Friday, June 6th, Solexperts installed an extensometer in BMB-A12.

Visits

Day	Date	Name of the Group	Visitors	Guides
Mon	02.07.2018	Secondary school Ste-Ursule	43	M. Pretalli/ G. Fiedler
Wed	04.07.2018	High school Neufeld	24	G. Fiedler
Sat	07.07.2018	Nagra Visitors Day	53	H. Sager/ P. Blaser/ O. Moser

C. Nussbaum, S. Schefer, D. Jaeggi and R. Raselli, June 6th, 2018



Figure 1: CI-D experiment: K. Kontar (Solexperts) carrying out some modifications of the surface cabinet in preparation for the saturation of intervals (Photo: R. Raselli, swisstopo).



Figure 2: GC-A experiment: H. Gutgesell (behind the green control panel) drilling borehole BGC-A1 in the pre-Niche North of Niche 2 (southeastern prolongation of the DR niche) (Photo: R. Raselli, swisstopo).

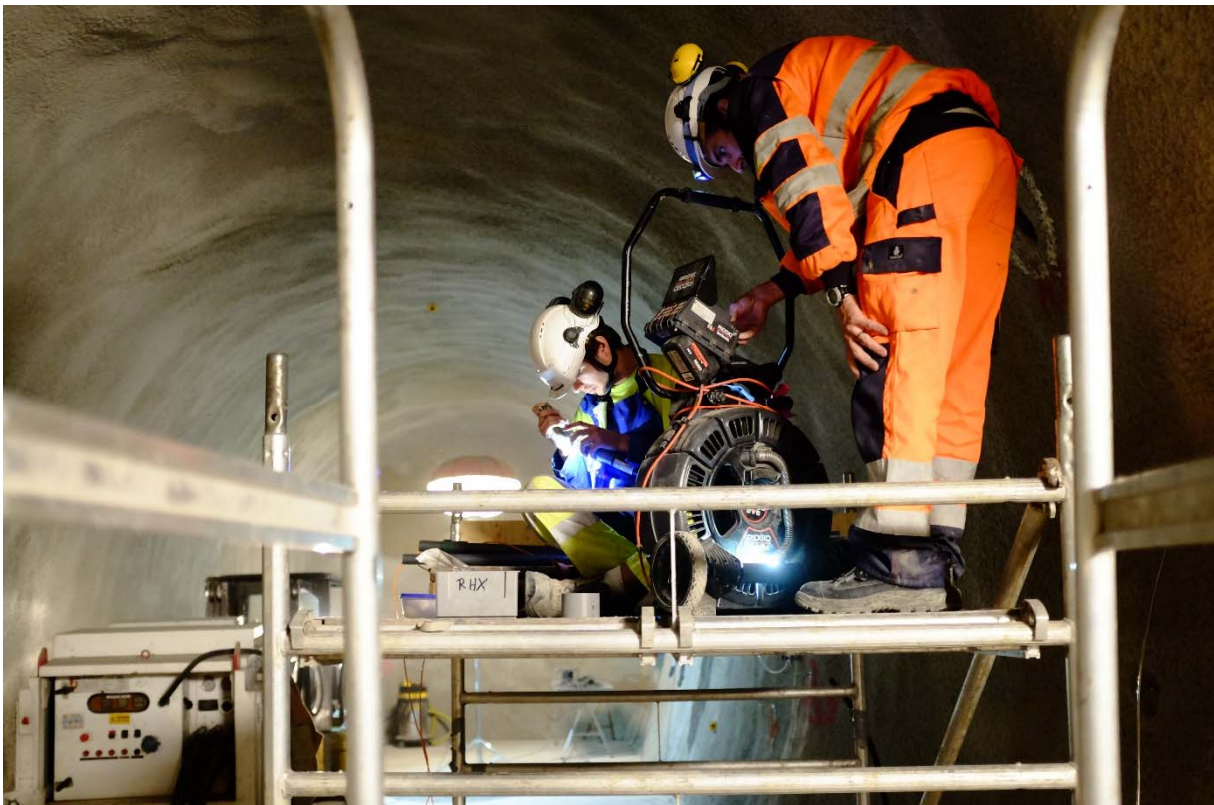


Figure 3: MB-A experiment: S. Fournier-Bidoz (Solexperts) and D. Jaeggi (swisstopo) inspecting the quality of the BMB-A11 borehole wall using the SeeSnake borehole camera (Photo: R. Raselli, swisstopo).