



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: August 6th – August 12th 2018 (Phase 24)

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Construction of Gallery 18

- The construction of Ga18 proceeded in the Passwang Formation. On Wednesday, August 9th, the Opalinus Clay was reached at GM24.2, which fits well with the existing geological model of the rock laboratory.
- The excavation reached GM 27.7 on Friday, August 10th. This is a progress of 8.7 m in week 32.
- All excavation debris is being transported outside the tunnel where it is being stored and inspected for fossils by B. Hostettler (NMBE) (**Figure 1**).

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

- From Monday to Thursday, August 6th – 9th, GeoSonic finished borehole BMB-A8 (**Figure 2**). An extensometer was installed by Solexperts on Friday, August 10th, down to a depth of 40.85 m.
- On Friday August 10th, GeoSonic installed the drill rig on a platform at borehole BMB-A9. The drill rig was oriented by I. Paupe (ATB SA).
- On Monday, August 6th, the contractor company Zuber installed a drilling-platform for BGR (**Figure 3**).
- From Tuesday to Thursday, August 7th – 9th, the BGR drilling team drilled borehole BMB-A18 (l=15 m and diameter=146 mm).
- On Friday, August 10th, the platform was moved to BMB-A19, where BGR installed the drill rig.
- Boreholes BMB-A18 to A21 are dedicated to the installation of stress monitoring strings. The installation of these strings will be carried out by the company Glötzl in one week.

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

- On Wednesday, August 8th, B. Yeatman (Chakraborty GmbH) was on site for maintenance of the monitoring system. Further he sealed the fiber optic calibration tank used as temperature reference for the BOTDA fiber optical cables (**Figure 4**).

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

- On Friday, August 10th, U. Mäder (University of Bern) checked all systems of the CI-D experiment. A pressure vessel was installed to keep constant packer pressures more easily. A new cabinet for standard solutions and sampling equipment was installed. Further, all the electrodes were checked. Also the pH was re-calibrated and then measured.

Important communication

- The excavation of Ga18 has proceeded and reached a stage, where the machinery does not affect the traffic in the Security Gallery severely anymore. Thus the access to the rock laboratory is granted again. Therefore, the suspension of the lab visits has been repealed. Guided groups are once more allowed to visit the existing part of the rock laboratory. No visits occurred in week 32.
- For contractors and partners it is possible to use the south access again. Short waiting periods on the construction side are to be expected. **Parking P1 and P2 must be kept clear at all time!** All cars must be parked in the ventilation hall north of the lab until further notice!!



Figure 1: Construction of Gallery 2018: The paleontologist B. Hostettler (NMBE) inspects the excavation debris for fossils on a daily base (Photo: R. Raselli, swisstopo).



Figure 2: MB-A experiment: The drilling campaign continued. D. Gabin (GeoSonic) proceeding the drilling of borehole BMB-A8 (Photo: R. Raselli, swisstopo).



Figure 3: MB-A experiment: S. Sanchez (BGR) on the drilling platform built by the contractor company Zuber (Photo: R. Raselli, swisstopo).



Figure 4: FE-M experiment: B. Yeatman (Chakraborty GmbH) next to the fiber optic calibration tanks he sealed (Photo: R. Raselli, swisstopo).