

Borehole Image Interpretations during ongoing operations – a workflow from a scientific drilling campaign in Switzerland

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Summary

The National Cooperative for the Disposal of Radioactive Waste (Nagra) currently pursues a multi- well scientific data gathering program in northeastern Switzerland to find the best suitable site for construction of a radioactive waste disposal. The target is the Opalinus Clay, a thick claystone formation of Lower Dogger age. During the program boreholes are drilled and borehole image logs are acquired among other measurements. Also, MHF and GTPT test are done in the open-hole

boreholes. Results of MHF testing are reviewed again with BHI, which are compared with the pre- MHF BHI runs. The image logs are run during ongoing drilling, testing and workover operations; this means acquisition, and also processing, QC and interpretation of BHI are performed under time and cost pressure. NiMBUC Geoscience developed a workflow for this project to deliver processed and QC'ed, highly accurate, hand-picked image interpretations within the required 12 hours to Nagra and

other vendors. This allows smooth and cost-efficient operations at the drill site. The high-quality interpretations are also the foundation for more detailed analyses and comparisons of and between the boreholes at a later stage. This is a good practice example of fitting BHI interpretations into ongoing drilling operations.