



Marsite Multiparameter borehole observatory

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Marsite multi-parameter borehole sensor observatory is installed within two identical boreholes drilled side-by-side at the same location. The two cased and cemented boreholes are 150 meters deep. The inside diameter of the casing is 155 millimetres providing a test environment to properly characterise and specify various parameters of low-noise broadband borehole seismic instrumentation.

Detailed description and discussion of the instrumentation installed in each borehole is presented. Deployment methods of very long period broadband borehole sensors and high gain tilt-meter with different hole-locks in a wet and dry borehole environment are discussed. The provided information focuses on the scientific results obtained from collocated boreholes giving advantages of a low-noise VBB borehole seismometer that has extended high frequency response of 150 Hz. The specification and design details of the strain meter cemented below the borehole casing at 150 meters will be described.