



## Borehole Measurements in Geothermal Wells: Why One Should Measure and Know Certain Parameters

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### Summary

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Geothermal projects are often characterized by high cost pressure and are focused on the implementation of a single project. As a result, a comprehensive borehole measurement program is often dispensed with and only a minimum of measurements are performed. The purpose of this talk is to clarify the importance of borehole measurements with regard to a comprehensive understanding of the subsurface and to explain the necessity of certain measurement methods by means of a proposal for a measurement program.



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Borehole measurements are an important tool for reservoir characterization, especially for the determination of inflow zones and payzones (or net reservoir), but also for the borehole condition. These parameters are important for long-term reservoir management and for any necessary development of the well bore in the reservoir area. The hole integrity after completion, in turn, forms the basis for the acceptance of the performance of the corresponding service provider and thus also for a possible warranty.

Borehole measurements, however, also provide information on the subsurface, which is required for the interpretation of surface geophysics such as gravimetry and seismic. Indications about the state of stress in the reservoir are necessary to identify hydraulically active fractures, but also to counteract possible seismicity. An adaptation of the measuring program to the lithology of the reservoir must be considered as well (granite requires, for example, other logs than limestone or sandstone).