

Well Integrity Logging Service & Geophysical Borehole Data Interpretation

Fraunhofer IEG offers a well integrity logging service for the evaluation of casing inspection and cement evaluation. Part of the service is the evaluation and interpretation of geophysical borehole logs from single wells and multi-well fields. Fraunhofer IEG cooperates with DMT to provide a solution for casing integrity services including logging, interpretation, and assessment of wells. Furthermore, designated IEG colleagues are recognized expert reviewers in well integrity for the Lower Saxony state office for mining, energy, and geology.

Additionally, to the geophysical borehole log evaluation offer, we support the preparation of geophysical logging campaigns, technical tenders, and market research. We provide services in data editing, splicing, trend, and environmental corrections, data homogenization as well as quality control upon the client's request. We work on professional commercial geophysical logging software, own laboratory and borehole logging tools. Our high-quality expertise can also be applied in the petroleum and coal industries, as well as for carbon and hydrogen storage in geothermal projects.

Well Integrity Logging Tool Equipment

- 3 1/2" Radial Segment Bond Tool (RSBT) *
- 3 3/4" Multifinger Caliper 60 Arm (MFC60) *
- 1 11/16" Bottom Temperature *

* Tool Manufacturer: ANTARES

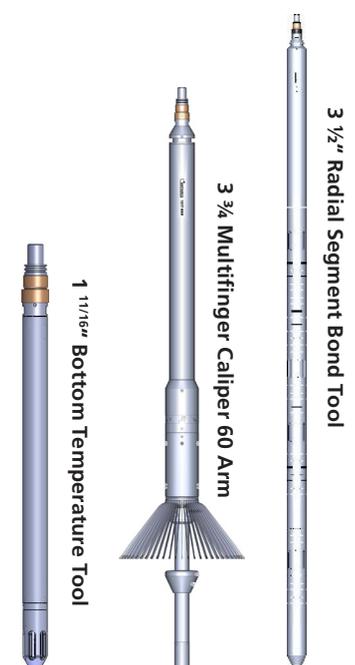
Two main scientific areas of expertise

Reservoir characterization

Using results from geophysical borehole logs, we provide reservoir parameters for the evaluation of geothermal potential and give inputs for numerical models. We support the discrimination of lithological layers and the construction of litho-logs and well tops for the development of geological-structural models. Upon the client's request, we offer more sophisticated geophysical borehole logging data evaluation using advanced petrophysical models.

Borehole integrity and reservoir performance

Based on geophysical borehole logging data, we provide services in cement integrity and corrosion evaluation. We advise on leakage identification and its mitigation from production logging data. Using information from injection and/or production tests we support the evaluation of reservoir productivity and estimation of rock mass permeability.



Interpretation and Tool Deliverables

RSBT Deliverables

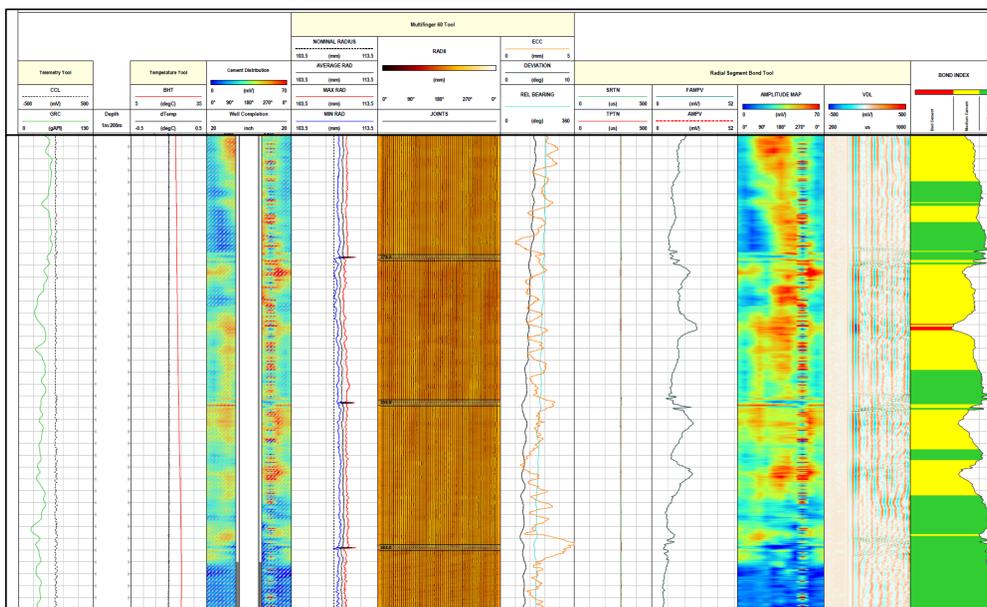
- Full circumferential resolution for better channel identification
- Provides a 360-degree cement map
- Cement bond quality measurement in slim and conventional wells
- Operates in casing from 4,5 in to 13,63 in
- Indicates channels and intervals using radial receivers
- Measures the attenuation of the acoustic energy in the casing to cement interface
- Quantitative analysis of cement bond to casing
- Quantitative analysis of cement bond to formation

MFC60 Deliverables

- Quantification of scale build up and corrosion
- Accurate location of holes, deformation or anomalies
- Detects axially oriented metal loss
- Identification of completion items and damage

TEMP Deliverables

- Borehole Temperature Profile



Example of a composite log plot generated for the interpretation of the recorded data

Visit us on our homepage
www.ieg.fraunhofer.de



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