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All broadband, low noise velocity borehole sensors manufactured have limited high frequency response. In this paper, results from the 89 mm diameter measuring only 600 mm long VBB very low noise sensor with 250 Hz High frequency corner (-3 dB points at 360 seconds and 250 Hz) is presented.
The high loop gain feedback sensor modules are based on mechanical long period suspension system. The modules are stacked 90 degrees to each other and the complete package with hole-lock weighs less than 22.5 Kg
Methods used to test the three borehole sensors is described. The test results are provided from triplet collocated borehole sensors with identical frequency responses.
The borehole sensor clamping mechanism is described. The topology of single jaw hole lock resonances is beyond 300 Hz providing resonant free sensor installation exceeding 300 Hz.

Promotional text

This abstract is describing a new technology for instrumentation of Borehole sensor systems for detecting underground manmade explosions. The described sensor system unifies high frequency and broad band long period sensor systems which currently does not exist.

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