Determination of Permeability from Damping  
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Abstract
Permeability generally means the ease with which fluids can move through rock, soil, or other earth materials. Boise State University has developed new methods, apparatus, and/or programming for determining the ability of a fluid to flow through a saturated material by measuring the dynamic response of the saturated material to shaking vibrations or shear wave propagation. Using this measurement, the permeability of the material can be mapped. The invention may use shear waves, inertial effects, and/or transmission effects to force the fluids through the pores of the material. This technology differs from previous methods in that it is consistent and directly related to the laws of physics rather than depending on local calibrations. This method will be useful for several applications ranging from production in oil wells and water wells to treatment of contaminated soils and waste disposal in landfills.

Advantages
- Improves the accuracy and effectiveness of drilling for oil and water.
- Determines permeability faster saving money as a result of not having to calibrate to local conditions.
- Knowing the permeability of a saturated material improves your ability to get fluid out.
- The invention senses beyond the immediate borehole.

Stage of Development
This technology is developed and a patent has issued.

Boise State is looking for a Licensee for this technology.

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