Spherical-Wave Computational AVO Modelling in Elastic and Anelastic Isotropic Two-Layer Media

Arnim B. Haase and Charles P. Ursenbach
University of Calgary, Calgary, AB, Canada
haaseab@ucalgary.ca

Abstract/Excerpt

Compressional-wave AVO responses and converted-wave AVO responses in elastic and anelastic two-layer isotropic Class 1 models are investigated. These responses are computed by utilizing Zoeppritz reflection coefficients and the Weyl/Sommerfeld-integral. Spherical-wave depth dependence for PP and PSv Class 1 models is found to be strongest near the critical angle. The constant-Q approximation is used to introduce anelastic effects. AVO responses of two-layer isotropic models are sensitive to anelasticity. This Q-factor dependence is strongest near critical angles.