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media3C. 2-D Dix-type equation in layered anisotropic media; 3D. 3-D NMO equation in heterogeneous anisotropic media; Chapter 4. Nonhyperbolic reflection moveout; 4.1 Quartic moveout coefficient; 4.2 Nonhyperbolic moveout equation; 4.3 P-wave moveout in VTI media in terms of the parameter ; 4.4 Long-spread moveout of SV-waves in VTI media; Appendices for Chapter 4; 4A. Weak-anisotropy approximation for long-spread moveout; 4B. P-wave moveout in layered VTI media; Chapter 5. Reflection moveout of mode-converted waves
5.1 Dip-dependent moveout of PS-waves in a single layer (2-D)5.2 Application to a VTI layer; 5.3 3-D treatment of PS-wave moveout for layered media; 5.4 PS-wave moveout in horizontally layered VTI media; 5.5 Discussion; Appendices for Chapter 5; 5A. 2-D description of PS moveout in a single layer; 5B. 3-D expression for the slope of CMP moveout; 5C. NMO velocity for converted-wave moveout; 5D. Weak-anisotropy approximation for PS-moveout in VTI media; 5E. 3-D description of PS moveout in layered media; Chapter 6. P-wave time-domain signatures in transversely isotropic media
6.1 P-wave NMO velocity as a function of ray parameter6.2 Two-parameter description of time processing; 6.3 Discussion: Notation and P-wave signatures in VTI media; 6.4 Moveout analysis for tilted symmetry axis; Appendices for Chapter 6; 6A. Dependence of NMO velocity in VTI media on the ray parameter; 6B. NMO velocity in tilted elliptical media; Chapter 7. Velocity analysis and parameter estimation for VTI media; 7.1 P-wave dip-moveout inversion for ; 7.2 Inversion of P-wave nonhyperbolic moveout; 7.3 Joint inversion of P and PS data; Chapter 8. P-wave imaging for VTI media
8.1 Fowler-type time-processing method

Sommario/riassunto

Following the breakthrough in the last decade in identifying the key parameters for time and depth imaging in anisotropic media and developing practical methodologies for estimating them from seismic data, this title primarily focuses on the far reaching exploration benefits of anisotropic processing. This volume provides the first comprehensive description of reflection seismic signatures and processing methods in anisotropic media. It identifies the key parameters for time and depth imaging in transversely isotropic media and describes practical methodologies for estimating them from