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Significance of Vertical Fabric Variation in a Shale -- A Journey to "Anoxia" — Reconstruction of an Event on the Devonian Sea Floor -- 6 Case Studies of Fabric Analysis in Evaluating Sedimentary Processes and Environments -- Marine Regressional Facies -- Marine Transgressional Facies -- Floodplain-Paleosol Facies -- Evaporite Facies -- Tidal Flat Facies -- Shallow Marine Shelf Facies -- Delta Complex Facies -- Submarine Slope Facies -- Marine Turbidite Facies -- Deep Marine Turbidite Facies -- Marine Basinal Facies -- 7 Formation of Shale by Compaction of Flocculated Clay--A Model -- 8 Fabrics of Some Hydrocarbon Source Rocks and Oil Shales -- Marine Hydrocarbon Source Rock -- Saline Lacustrine Hydrocarbon Source Rock -- Fresh-Brackish Lacustrine Hydrocarbon Source Rock -- 9 Fabric of Geopressured Shale -- Geopressured Shale Analysis -- General Geology and Composition -- Description of Shale Fabric -- Interpretation of Shale Fabrics -- 10 Composition of Argillaceous Rocks -- 11 Conclusions -- References.

Sommario/riassunto

A major reason for the lack of understanding of argillaceous rocks is that the key to understanding their history lies in their microfabric. Argillaceous Rock Atlas addresses this aspect by taking a systematic approach to the analysis of shale fabrics. This approach combines such techniques as scanning electron microscopy, x-radiography and thin-section petrography. Thus the book is amply illustrated with scanning electron and thin section photomicrographs and x-radiograms which show the salient features of shale at a variety of scales. A great portion of the book is devoted to case studies, supplemented by mineralogical and geochemical data, which demonstrate the utility of these techniques in the interpretation of depositional environments, diagenetic processes and possible economic significance of argillaceous rocks. Argillaceous Rock Atlas is a valuable and unique reference for students and researchers involved in the fields of sedimentology and stratigraphy, petrology, petroleum geology, hydrogeology and geochemistry.
