1. Record Nr. UNINA9910480434703321 Autore O'Brien Neal R **Titolo** Argillaceous Rock Atlas [[electronic resource] /] / by Neal R. O'Brien, Roger M. Slatt New York, NY:,: Springer New York:,: Imprint: Springer,, 1990 Pubbl/distr/stampa **ISBN** 1-4612-3422-0 Edizione [1st ed. 1990.] 1 online resource (XV, 141 p. 85 illus., 14 illus. in color.) Descrizione fisica 549 Disciplina Soggetti Mineralogy Mineral resources Geotechnical engineering Sedimentology Fossil fuels Mineral Resources Geotechnical Engineering & Applied Earth Sciences Fossil Fuels (incl. Carbon Capture) Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Nota di bibliografia Includes bibliographical references and index. Nota di contenuto 1 Introduction -- Definitions -- Argillaceous Rock Classifications --Stratification and Parting Description -- Examples Seen in Outcrop --Classification of Very Fine-Grained Sedimentary Rocks -- Textural Classification of Fine-Grained Sediments and Rocks -- 2 Fabric Analysis Techniques -- X-radiography -- Petrography -- Scanning Electron Microscopy -- 3 X-radiography, Petrography and Scanning Electron Microscopy Descriptions -- X-radiography Classification of Argillaceous Rock Macrofabric -- Petrographic Classification of Black Shales -- Scanning Electron Microscopy Descriptions -- 4 Miscellaneous Features in Argillaceous Rocks -- Pyrite Framboids --Fecal Pellets -- Palynomorphs in Shales -- 5 Case Studies of Specific Distinctive Features -- Well Developed Lamination in a Black Shale (Example I) -- Well Developed Lamination in a Black Shale (Example II) -- Organic Variation in a Shale — Clues to the Cause of Lamination --

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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 thinsection 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.