Record Nr. UNINA9910583038603321 Autore Saxena Vimal Titolo Handbook of borehole acoustics and rock physics for reservoir characterization / / Vimal Saxena, Michel Krief, Ludmila Adam Pubbl/distr/stampa Amsterdam, Netherlands: ,: Elsevier, , [2018] ©2018 **ISBN** 0-12-812332-X 0-12-812204-8 Descrizione fisica 1 online resource (486 pages) Disciplina 627.86 Soggetti Petroleum engineering Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Chapter 1: Introduction -- Chapter 2: Introduction to Wave Propagation Nota di contenuto -- Chapter 3: Borehole Acoustic Logging -- Chapter 4: Rock Physics Models -- Chapter 5: Sonic Porosity-Lithology -- Chapter 6: Stoneley Permeability -- Chapter 7: Acoustic Saturation -- Chapter 8: Anisotropy Evaluation -- Chapter 9: Rock Strength and Stress Analysis -- Chapter 10: Core Elasticity Measurements -- Chapter 11: Casedhole Acoustics -- Chapter 12: Rock Physics Workflow and Example. "The Handbook of Borehole Acoustics and Rock Physics for Reservoir Sommario/riassunto Characterization combines in a single useful handbook the multidisciplinary domains of the petroleum industry, including the fundamental concepts of rock physics, acoustic logging, waveform processing, and geophysical application modeling through graphical examples derived from field data. It includes results from core studies, together with graphics that validate and support the modeling process, and explores all possible facets of acoustic applications in reservoir evaluation for hydrocarbon exploration, development, and drilling support. The Handbook of Borehole Acoustics and Rock Physics for Reservoir Characterization serves as a technical guide and research reference for oil and gas professionals, scientists, and students in the multidisciplinary field of reservoir characterization through the use of petrosonics. It overviews the fundamentals of borehole acoustics and

rock physics, with a focus on reservoir evaluation applications, explores

current advancements through updated research, and identifies areas of future growth. Presents theory, application, and limitations of borehole acoustics and rock physics through field examples and case studiesFeatures "Petrosonic Workflows" for various acoustic applications and evaluations, which can be easily adapted for practical reservoir modeling and interpretation. Covers the potential advantages of acoustic-based techniques and summarizes key results for easy geophysical application"--