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Sommario/riassunto	This comprehensive volume, edited by Dr. Sid-Ali Ouadfeul, explores the application of artificial intelligence in predicting and modeling hydrocarbon resources. The book delves into various methodologies, including seismic genetic inversion, neural networks, and fuzzy logic, to enhance the exploration and extraction processes in shale gas reservoirs. It presents case studies from notable shale formations like the Barnett Shale, examining aspects such as pore pressure estimation, wellbore stability, and lithofacies recognition. The text is intended for professionals and researchers in petroleum engineering and geosciences, aiming to provide innovative solutions and techniques for optimizing hydrocarbon resource management.

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