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Nota di contenuto	Stress-Strain State of Rocks -- Deformation and Fracture of Rocks In The Presence of Filtration -- Mechanical and Mathematical, and Experimental Modeling of Oil and Gas Well Stability -- Equipment For Studying Deformation and Strength Properties of Rocks In Triaxial Loading -- Loading Programs For Rock Specimens On Triaxial Independent Loading Test System (Tilts) -- Dependence of Permeability On Stress State -- Influence of Filtration On Stress-Strain State and Rock Fracture In The Well Vicinity -- Results of Tests of Rock Specimens By Using Tilts -- Mathematical Modeling of Mechanical and Filtration Processes In Near-Wellbore Zone -- Directional Unloading Method - A New Approach To Enhancing of Oil and Gas Well Productivity.
Sommario/riassunto	The book presents an integrated approach to studying the geomechanical processes occurring in oil and gas-bearing formations during their development. It discusses the choice of a model that takes into account the basic properties of rocks; experiments to find model parameters; numerical modeling; and direct physical modeling of deformation and filtration processes in reservoir and host rocks. Taking

into account features of rock behavior, such as anisotropy of the mechanical properties of rocks during elastoplastic deformation; dependence of permeability on the total stress tensor; the contribution of the filtration flow to the formation stress state; and the influence of tangential as well as normal stresses on the transition to inelastic deformation, it demonstrates how the presented approach allows the practical problems of increasing the productivity of wells, oil recovery, and ensuring the stability of wellbores to be solved. The book is intended for specialists, including geoengineers working in the oil and gas sector, teachers, graduate students and students, as well as all those interested in scientific and technological developments to meet the enormous demand for raw materials and energy. .
