





Special Issue Reprint

Recent Advances in Hydrocarbon Production Processes from Geoenergy

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This reprint from the Special Issue "Recent Advances in Hydrocarbon Production Processes from Geoenergy" brings together cutting-edge research on the exploration and development of unconventional reservoirs. It covers advanced technologies for geological sweet spot analysis, production enhancement, and long-term stabilization strategies, supported by theoretical modeling, data analysis, and field applications. Key themes include the following:

Advanced Sweet Spot Analysis: Incorporating 3D seismic imaging, reservoir simulation, real-time monitoring, and Al-driven algorithms to improve reservoir characterization and optimize production.

Innovative Hydraulic Fracturing: Evolving from process optimization to mechanistic studies, with emphasis on fracture parameter design and proppant transport to enhance long-term fracture conductivity.

Stabilization and Production Maintenance: Addressing two-phase flow behavior and high-rate water injection in low-permeability reservoirs to sustain formation energy and productivity in mid-to-late field life.



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