



## **A Geomechanics-Orientated Workflow for Unconventional Low Permeable Resource Development**

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### **Abstract**

Based on geomechanical parameters of dynamic and static rock mechanical properties, rock strength, in-situ principal stress orientations and magnitudes, formation pore pressure, and geomechanical indices such as brittleness, a geomechanics-orientated workflow has been established in this poster to develop unconventional low permeable resources. In conjunction with geomechanical parameters, key geological factors of formation rock mineralogy, rock texture and structure, natural fracture system, rock porosity and permeability, TOC, thermal maturation, PVT properties, water saturation, etc have also be incoporporated into this workflow. The workflow includes a systematical optimization for well trajectory, drilling operation, well completion, multi-stage stimulation of horizontal well, and geomechanics-coupled reservoir simulation. This geomechanics-orientated workflow contains various feedback loops, which is able to account for various available data and new data input to improve unconventional low permeable resource evaluation and development results.