DEPARTMENT OF Geosciences and Geological and Petroleum Engineering

Numerical Geomechanics

Numerical simulation of buckle folding

- Understanding the process of deformation during buckling and associated fracture occurrence
- Deformation related fluid flow during buckling

Fabric evolution in high strain zones

 Simulation of the evolution of porosity and permeability during deformational geologic processes

Salt tectonics

 Simulation of salt related geologic structures and the associated in situ stress changes

Deformation bands

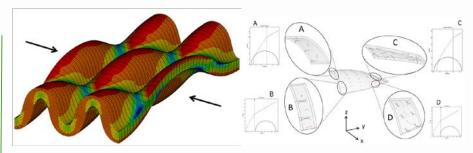
• Simulation of joint initiation in deformation bands

Petroleum related Geomechanics

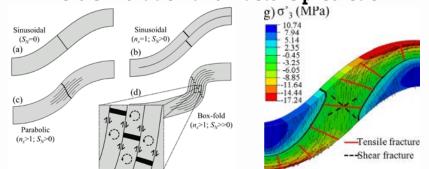
- Wellbore stability/integrity analysis
- Deformation induced fluid leakage
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Fold simulation and fracture prediction



Keywords

 #Buckling, #Folding, #Finite Element Analysis, #Stress, #Mechanical Earth Modeling

