UT GeoFluids

We study the state and evolution of pressure, stress, deformation, and fluid migration through experiments, models, and field study. We are dedicated to producing innovative concepts that couple geology and fluid flow.

1. Experimental: Analyze fabric, acoustic, electrical, and material properties of mudrocks : 0.1-100 MPa.
2. Modeling: Develop and apply coupled models to link realistic rheologies, deformation, stress (shear & normal), and pore pressure
3. Field Study: Analyze pore pressure, stress, deformation in thrust belts and in the sub-salt.

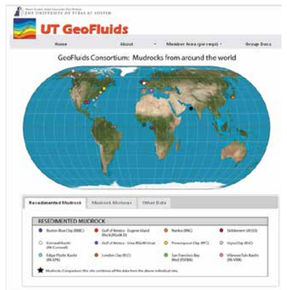
Website: http://www-udc.ig.utexas.edu/geofluids/

Contacts: pflemings@jsg.utexas.edu, john.germaine@tufts.edu, mariakat@mail.utexas.edu

Annual Consortium Meeting

Deliverables:
- Online presentations
- Online database of experimental program
- Publications
- Online software
- Spreadsheets, handbooks

2020 Consortium Meeting
63 attendees representing
10 different companies



Online GeoFluids database

Transferring technology at the annual meeting and workshop

UT GeoFluids: A team effort of UT Geoscientists and Tufts Geotechnical Engineers

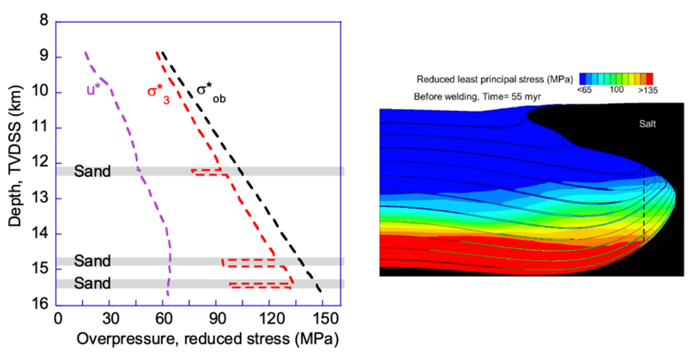
GeoFluids Co-Directors

Peter Flemings
Professor
Jackson School
of Geosciences
The University of Texas
at Austin

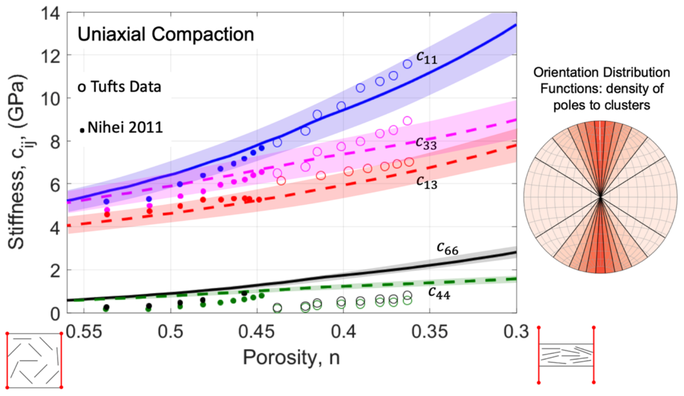
Jack Germaine
Research Professor
Department of Civil and
Environmental Engineering
Tufts University

4 Research Scientists
10 Graduate Students
2 Collaborating Faculty
4 Staff/Technical Support

Geomechanical Modeling

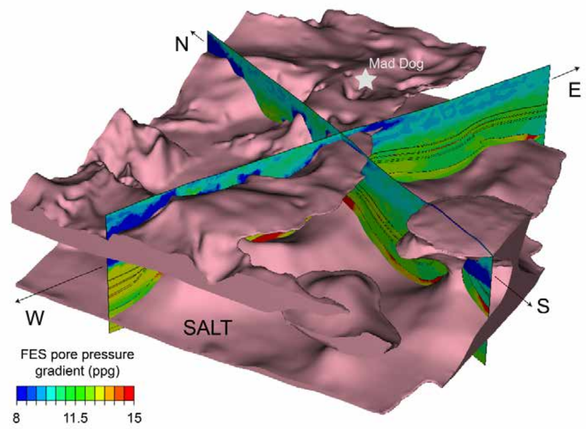


Modelling hydromechanical behavior of sands in salt basins

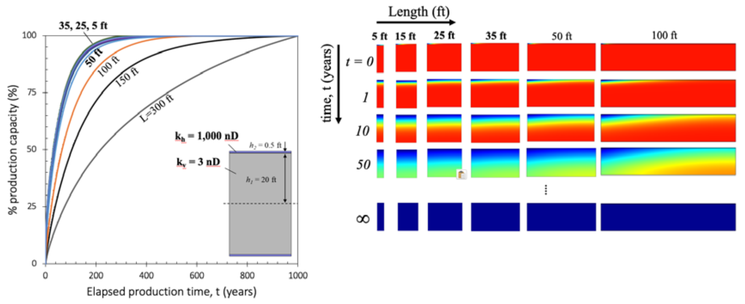


Velocity and geomechanics

Field Studies

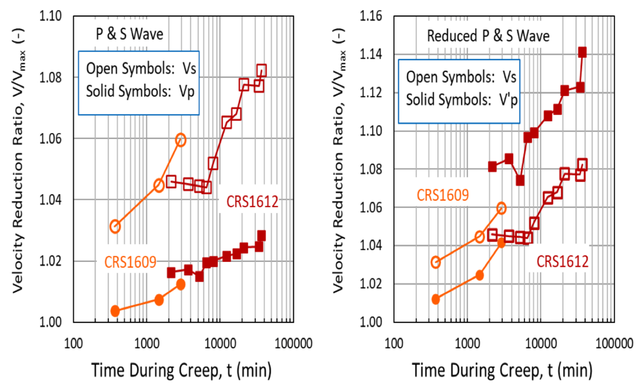


Pressure and stress prediction at Mad Dog using the FES method and a 3D static model

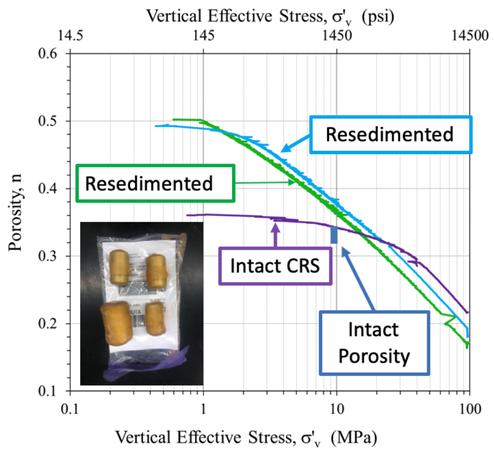


Impact of permeability variation and reservoir length on production in the Wolfcamp Fm.

Experimental



Velocity changes during secondary compression



Intact vs. resedimented behavior

TEXAS Geosciences
The University of Texas at Austin
Jackson School of Geosciences

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Tufts University
School of Engineering