

## Characterizing reservoirs one well at a time

RTC Lab can provide data to characterize your reservoirs and ground truth geomechanical models from tensile to shear failure, provide elastic properties and calibration, evaluate borehole stability and study property anisotropy/heterogeneity, all with a short turnaround time in a data-secure environment. We can characterize seals and reservoirs, from underburden to overburden, both conventional and unconventional, from six-inch core to rotary sidewall samples. Our capabilities are easily integrated with on-site core analysis and geochemical study.

For more information  
or to schedule a tour  
please contact

[info@RTCLab.chk.com](mailto:info@RTCLab.chk.com)

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RTC Lab is located on the corporate campus of Chesapeake Energy Corporation in Oklahoma City. All work done at the lab is kept confidential. Your samples and results remain protected, and data is stored on a firewall-protected encrypted FTP site completely separate from Chesapeake servers. Lab employees are bound by a confidentiality agreement.

TESTED SUCCESS,  
PROVEN RESULTS  
**WORKING FOR YOU**



# ROCK MECHANICS

Do you need mechanical stratigraphy?

Do your models rely on unvetted consortia data or values collected from textbooks?

Are you having challenges with wellbore stability and wasting time sidetracking wells through a specific formation?

Do you know how your reservoir will compact during depletion?



Our extensive capabilities offer an opportunity to collect the data you need to support geomechanical modeling, evaluate reservoir characterization, and design stimulation, depletion and abandonment strategies.

## CAPABILITIES INCLUDE

- ✓ Brazilian tensile testing
- ✓ Unconfined compressive strength
- ✓ Confined compressive strength
- ✓ Multistage compressive strength
- ✓ Concurrent ultrasonic velocities
- ✓ Biot's coefficient to nanodarcy rock

- ✓ Permeability testing
- ✓ Sampling down to 5/8" diameter
- ✓ Custom stress path testing available
- ✓ Tri-axial stress conditions up to 10,000 psi confining ( $\sigma_{2/3}$ )
- ✓ Overburden stress to 110,000 pounds-force ( $\sigma_1$ ) and pore pressure to 10,000 psi
- ✓ Strain rate control from  $1e^{-4}$  to  $1e^{-8}$  at a daily machine rate
- ✓ Patented 3-D ultrasonic anisotropy testing done in an effective stress setting with independent horizontal stresses to 10,000 psi and overburden stresses to 12,000 psi

