

Pressure Pumping Technology Center

World-class geological
and reservoir characterization

Baker Hughes geological group

We believe the best well completion or stimulation treatment begins with a Baker Hughes Understand *The Reservoir First™* study.

We pioneered the use of this concept—combining geological and reservoir characterization with simple, economical, and effective stimulation and remediation solutions to maximize well performance. Staff geologists and physicists perform a wide range of laboratory tests and data analyses to help ensure fluid compatibility and effectiveness and optimize well designs, completion practices, and stimulation plans.

Areas of expertise

Geological services

- Geological characterization
- Inorganic sample characterization (scales and other wellbore solids)
- Materials characterization
- Cathodoluminescence
- Employment of various techniques
 - Mineralogical analysis by x-ray diffraction
 - Elemental compositions by x-ray fluorescence
 - Thin-section petrography
 - Scanning electron microscopy
 - Energy dispersive spectroscopy
 - Optical microscopy

Rock mechanics laboratory

Reservoir rock and materials properties

- Failure criteria testing (compression)
- Determination of the state of stress for elastic and plastic transition
- Young's modulus (static and dynamic)
- Poisson's ratio (static and dynamic)
- Formation hardness (Brinell hardness)
- Rock embedment strength testing
- Proppant embedment testing
- API proppant crush testing
- Shale and formation softening from acids and fracturing fluids
- Ultrasonic velocity anisotropy to determine horizontal stress orientation