

Pressure Pumping Technology Center

Support for pressure pumping operations worldwide

Baker Hughes technology group

For more than a century, Baker Hughes has been a global leader in oilfield technology development. We start by listening to customers' technical and economic concerns so we can provide optimal, world-class solutions. Our pressure pumping technology group, located near Houston, Texas, relies on a full suite of state-of-the-art laboratory equipment to develop new technologies that support our customer's operations.

Guided by product line experts, the pressure pumping technology group also supplements a network of worldwide regional laboratories. We also provide the testing, analysis, and laboratory services that help maintain our reputation for reliable, flexible solutions that suit your well conditions.

Baker Hughes areas of expertise

Cementing services

- Standard API cement and slurry testing
- Gas flow and gel strength analysis
- Cement mechanical property testing
- Fluid compatibility testing under downhole conditions

- Critical cementing service modeling (Baker Hughes CemFACTS™, Baker Hughes WellTemp™ software)
- Ultrahigh temperature application testing

Fracturing services

- Standard API rheological and breaker analysis
- Standard API and specialty proppant evaluation
- Proppant conductivity testing
- Tubular friction pressure analysis (flow loop testing)
- Advanced fracture simulation modeling
- Critical fracture system application testing

Production enhancement services

- Acid corrosion inhibitor testing
- Acid compatibility testing
- Surfactant optimization
- Reservoir conformance application testing

Sand control services

- Remedial sand control application testing (consolidation methods)
- Formation sand sieve analysis and gravel sizing recommendations
- Fluid loss pill application testing
- Well-inflow pressure analysis
- Full-scale gravel pack wellbore model simulations

Shale technology

- Advanced reservoir studies
- Production analysis
- Log analysis
- Geomechanical simulations
- Reservoir simulations

Geological services

- Mineralogical analysis
- Mechanical rock properties analysis
- Materials characterization
- ESEM and thin section petrographic review
- Reservoir porosity and permeability studies Properties
- Regained permeability comparisons

Completion fluids services

- Brine formulation and analysis
- Corrosion and stress corrosion cracking testing
- TCT and PCT brine crystallization analysis
- Flow assurance testing and modeling
- Fluid displacement testing and modeling

StimPlus™ services

- Flow assurance modeling (scales, paraffins, hydrates)
- Tube blocking for scale testing
- HP/HT paraffin deposition loop analysis
- Bacterial control testing
- Paraffin and asphaltene deposition testing
- Gas hydrate inhibition rocking cell

QA/QC and analytical services

- Chemical products quality control
- Qualification for pressure pumping chemical products
- Monitor quality through statistical analysis
- Polymer molecular weight testing
- Organic compound evaluation
- Pre- and post-stimulation fluid analyses
- Water and brine analyses
- Bacteria determination
- Full API oil analyses

