



GEO ENVIRONMENTAL MONITORING SOLUTIONS

HT 5000X – HIGH TEMPERATURE SYSTEM

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The HT 5000X is a high temperature, fully functional triaxial apparatus designed to perform standard coupled process petrophysical and rock mechanics experiments at reservoir conditions of overburden pressure, pore pressure and temperature. It is a two-vessel system: a standard triaxial vessel and a high temperature vessel. Confining and pore pressure for both vessels is 200 MPa.

Features for Standard Vessel

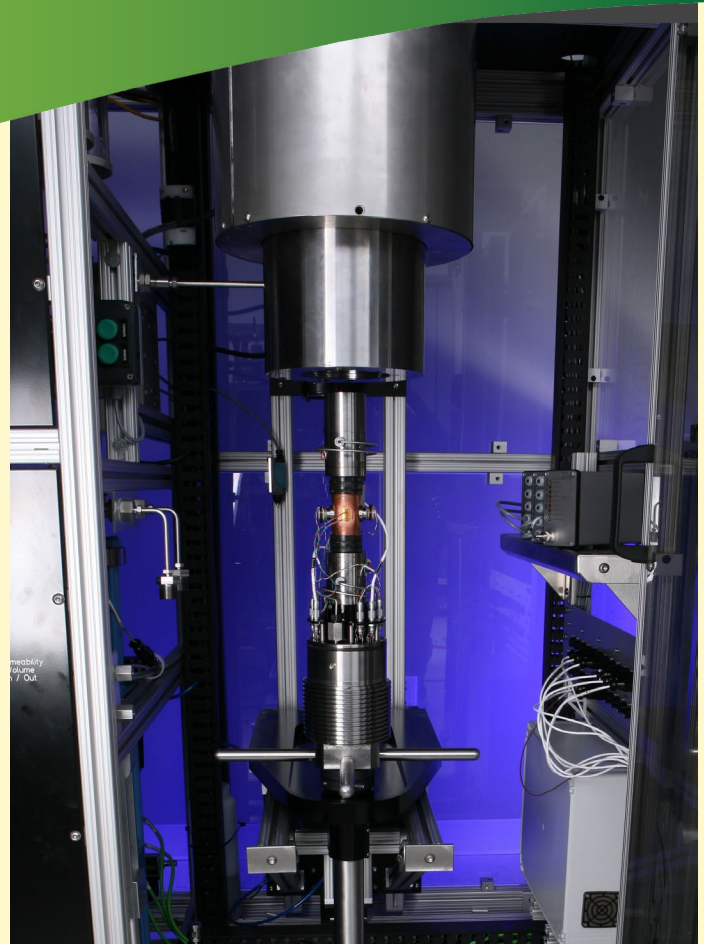
- Deformation experiments for conventional and specialized loading paths
- Servo-hydraulic control of strain rate, force, confining pressure, pore pressure and flow rate
- Pore pressure intensifier compatible with water, brine, oil, gas (including CO₂)
- Strain measurement with either LVDTs or strain gages
- Control of pressures and temperature at reservoir conditions
- GEMS Software for system control and data acquisition
- LVDTs
- Strain Gages
- HPU
- Temperature to 170 C (standard vessel)

Features for High Temperature Vessel

- 200 MPa – Confining Pressure
- 200 MPa – Pore Pressure
- Acoustics
- Temperature to 300 C (high temperature vessel)

End Caps for the Standard System

- Ultrasonic Transducer The end caps measure one compressional and two orthogonally polarized shear waves and waveforms at confining pressures, pore pressures and temperatures



appropriate for each system. Each transducer operates at a center frequency of 500 to 700 kHz.

- Permeability Measures permeabilities between 0.1 millidarcies and 500 millidarcies.
- Low Permeability Low permeability materials of 0.01 microdarcies to 50 microdarcies.
- Complex Electrical Impedance (Formation Factor) Resistivity is measured at frequencies between 0.02 Hz and 100 kHz.

High Temperature Vessel

- Ultrasonic Transducer The end caps measure one compressional and two orthogonally polarized shear waves and waveforms at confining pressures, pore pressures and temperatures appropriate for each system.