Biax Experiment *(rev. 6 August 2018)*

Exp. Name: P5198S03MIN6 Date/Time: 11-15-18
Operator: Bolton
Example name: PXXXXBttMatNN

Sample Block Thickness w/ no gouge:
___ Steel 5x5 cm, _____mm
___ Titanium 5x5 cm, _____mm
X Steel 10x10 cm, 69.50 mm
___ Titanium 10x10 cm, _____mm

___Vessel (Small Single Direct)-Frits: _____
___Vessel (Large Single Direct)
___Vessel (5x5 Grooved)-Frits: _____
Vessel Side Blocks: _____Empty Block + frits: _____

For Current Calibrations see: ~barre/s0/data/calibrations/MasterCalibrationsFile.xlsx

Vertical Load Cell:
__62mm hollow (19.7298 mV/kN)
X 44mm solid "V" (11.3519 mV/kN)
__22mm Vert. (0.7321 V/kN)

Horizontal Load Cell:
__62mm hollow (**Low Gain**: 18.561 mV/kN; **High Gain**: 172.099 mV/kN)
X 44mm solid "H" (**Low Gain**: 11.626 mV/kN; **High Gain**: 105.9 mV/kN)
__22mm Horiz. (0.7736 V/kN)

Example conversion to stress (e.g., 62 mm Horizontal Cell, Low Gain, 5cm x 5cm sample)
(18.722mV/kN)(1000kN/MN)*(1V/1000mV) = (1/18.722V/MN)/(2.5e-3m²) = 21.365238 MPa/V or 0.046805 V/MPa*

Layer Thickness (total on bench): 75.35 mm Under Load: _____mm@sample_____
Material (Qtz, Granite, ?): Min-U-Sil 40 &
Particle Size, Size Distribution: 10.5 µm

Vert. Load Initial Voltage -4.789
DPM readouts (kN)
Vertical @ Zero Load: 117
Horizontal @ Zero Load: 031

Horz. Load Initial Voltage -4.649
Normal Stress(es): 6-11 (MPa)
Voltage(s) at load: 1.705
Calibration(V/MPa): 1.059 MPa, LG = 0.11626 V/MPa

Vessel Pressure: Pore Fluid: _____
*(0.1461 V/MPa) *Pore Pressure A:* _____ *Initial Voltage:* _____ *Voltage at load:* _____
High gain: 1.4702 V/MPa Gain: High/Low
*(0.1460 V/MPa) *Pore Pressure B:* _____ *Initial Voltage:* _____ *Voltage at load:* _____
High gain: 1.4743 V/MPa Gain: High/Low
(0.1471 V/MPa) *Confining Pressure:* _____ *Initial Voltage:* _____ *Voltage at load:* _____
**Calibration reflects current location of pressure transducer (A is on B and vice versa)*
(0.412 V/kPa) *Differential Press:* _____ *Initial Voltage:* _____ *Voltage at load:* _____

Data Logger Used: 8-CH MANUM Control File
Horz. DCDT: X Long rod __ Short rod Vert. DCDT: ___ TT1"/Transtek 2" Gain: High/Med/Low

Purpose/Description: Slow slip w/ Ar; humidified in-situ; 3mm layer 10µm/s; σn 6-11 MPa

Acoustics blocks used 0.4.A & 0.4.B
Temperature (°C): 22.7 Relative Humidity (%): 14.5

@ Hyd. Power Supply
Tank Temp (°C): ____
Temp In (°F): ____
Pres. In (psi): ____
Temp Out (°F): ____
Pres. Out (psi): ____
Flow (lpm): ____

@ Chiller
Panel Temp (°F): ____ Temp In (°F): ____
Panel Pres. (psi): ____ Pres. In (psi): ____
Near Pres. In (psi): ____ Out Temp (°F): ____
Near Pres. Out (psi): ____ Out Pres. (psi): ____

#3783 @ 6 MPa σn

#37383 ↑ to 1kHz & start shearing
@ 10μm/s

#2062383 reset Vcnt & On Board

#2248383 ↑ to 7 MPa σn

#2335000 start shearing @ 10μm/s

#2870383 ↑ to 8 MPa
& switch to low gain

#3590000 ↑ to 9 MPa

#4075000 ↑ to 10 MPa

#4580000 ↑ to 11 MPa

#4964383 Stop exp

Acoustics

CH4 – Left

CH62 – Right

Slip	σn	Volt	Hg = 1.059 V/MPa LG = .11626 V/MPa
Slip total ~ 20mm	6	1.705	Hg
	7	2.764; -4.285	Hg
33.26-	8	~~4.168~~ -4.170	Lg
42-50	9	-4.053	↓
50-58	10	-3.937	
58-66	11	-3.820	
66-74			