

Biax Experiment (rev. 27 June 2019)

Exp. Name: p5363S03GB5
 Operator: Bolton
 Example name: PXXXXBttMatNN

Date/Time: 10-16-19
 Hydraulics start: 1370.5
 Hydraulics end: _____

75.26
74.96
74.84

Sample Block Thickness w/ no gouge:
 ___ Steel 5x5 cm, _____ mm ___ Vessel (Small Single Direct)-Frits: _____
 ___ Titanium 5x5 cm, _____ mm ___ Vessel (Large Single Direct)
 Steel 10x10 cm, 69.50 mm ___ Vessel (5x5 Grooved)-Frits: _____
 ___ Titanium 10x10 cm, _____ mm Vessel Side Blocks: _____ Empty Block + frits: _____

For Current Calibrations see: ~gpfs/group/cjm38/default/Calibrations/

Layer Thickness (total on bench): 75.02 mm Under Load: _____ mm@sample
 Material (Qtz, Granite, ?): GLASS BEADS
 Particle Size, Size Distribution: 104-149 μm

Load cells: _____ Contact area: 6x6 cm²

Load cell name	Calibrations (mV/kN)		Target stress (MPa)	Init. Voltage	Volt. @ load
62 mm H	LG: 18.561	HG: 172.1	Hor: <u>5 MPa</u>	- .158	6.037
<u>44 mm H</u>	LG: 12.3	<u>HG: 123.9</u>	Calibration: (V/MPa) <u>1.239</u>		
22 mm H	Gain: 773.6		Vert:		
62 mm V	LG: 19.73	HG: NA	Calibration: (V/MPa)		
<u>44 mm V</u>	<u>LG: 32.3</u>	HG: 309			
22 mm V	Gain: 732.1				

Vessel Pressure: 55.73 Pore Fluid: _____

Calibrations (V/MPa)		Pressures (MPa)	Initial Voltage	Voltage @ Load
LG: 0.147	HG: 1.52	PpA:		
LG: 0.146	HG: 1.48	PpB:		
Gain : 0.1456		Pc:		
LG: NA	HG: NA	Pdiff:		

Data Logger Used: 8-clt MANUAL Control File
 Horz. DCDT: Long rod _____ Short rod _____
 (LR - HG: 0.622 mm/V LG: 1.27 mm/V)
 SR - HG: 0.64 mm/V LG: 1.32 mm/V
 Vert. DCDT: TT 2" Gain: High/Low
 (HG: 0.57 mm/V LG: 2.85 mm/V)

Purpose/Description: Run in @ 20 MPa with 1/2 volume then
↓ Vel. to 1.3 → 3 → 30 → 100; 3 mm layer;
hemispherical in-situ & overnight.

Acoustics blocks used 10.6.A & 10.6.B
 Temperature (°C): 23.5 Relative Humidity (%): 43.4

- | | | | |
|----------------------------|---------------------------|--------------------------------|----------------------------|
| @ Hyd. Power Supply (HPS) | Chilled water at HPS | Chiller Unit | Process water at Chiller |
| 14. Tank Temp (°C): _____ | 1. Temp In (°F): _____ | 6. Panel Temp (°F): _____ | 10. Temp In (°F): _____ |
| 15. Temp. Out (°C): _____ | 2. Pres. In (psi): _____ | 7. Panel Pres. (psi): _____ | 11. Pres. In (psi): _____ |
| 16. Pres. Out (psi): _____ | 3. Temp Out (°F): _____ | 8. Near Pres. In (psi): _____ | 12. Temp Out (°F): _____ |
| | 4. Pres. Out (psi): _____ | 9. Near Pres. Out (psi): _____ | 13. Pres. Out (psi): _____ |
| | 5. Flow (lpm): _____ | | |

- # Shear @ 20 μ m/s for \sim 10 mm
- # 825000 \downarrow to .3 μ m/s switch to high gain.
- # 2495000 \uparrow to 3 μ m/s (\sim 2.5 mm of slip)
- # 3335000 switch to low gain, offset, \uparrow 300ms.
- # offset on base \uparrow to 600 μ m/s.

1260s

(378 μ m/s)

Acoustics

10.6. B

CH 3 \rightarrow 12

CH 4 \rightarrow 14

10.6. A

CH 58 \rightarrow 17

CH 59 \rightarrow 14

CH 60 \rightarrow 12

CH 61 \rightarrow 4

PID

	<u>Horz.</u>	<u>Vert.</u>
P	700	995
I	80	0
D	10	0
Deriv	10	10
FB	512	512
E-gain	800	950