Biax Experiment

Exp. Name: p5483WGFracNSPPosc
Operator(s): Wood, Borate

Date/Time: 30 Jan. 2021
Hydraulics start: 3808.1
Hydraulics end: 3846.5

Sample Block Thickness w/ no gouge:

Layer Thickness (total on bench): mm @sample
Under Load: mm
Material (Qtz, Granite, ?): WG, Ex-situ Fractured (sample p5346).
Particle Size, Size Distribution :

Load Cells: Contact Area: 0.0022292545 m^2

Load cell name	Calibrations (mV/kN)	Target stress (MPa)	Init. Voltage	Volt. @ load
44mm Solid Horiz	119.3033 (V/MPa): 0.26596	2, 9.25, 11, 13, 15, 18	0.999	1.53091, 3.45911, 3.92453, 4.45645, 4.98836, 5.78623

Vessel Pressures: Pore Fluid: DI H2O

	Calibrations (V/MPa)	Pressures (MPa)	Init. Voltage	Volt. @ load
Pc	Gain: 0.1456	8.25, 10.5, 12, 13.5, 12	-0.1495	1.05137, 1.37888, 1.59722, 1.81557, 1.59722
PpA	1.5177	2.6	-0.114	3.83197
PpB	1.483	2.6, 1.4	-0.56	3.29585, 1.51623

Data Logger Used: 16 channel
Horiz. DCDT: *short rod*
0.6545 mm/V

Control File: No
Vert. DCDT: Trans-Tek 2
2.8498 mm/V

Purpose/Description: p5369 experiment follow-up.
DAET: oscillate PP and limited NS oscillations and increasing effNS (modulate fracture closure).
Active-source ultrasonic recording: 8 transmitters, 10 recievers using SDS sideblocks v2.

Acoustics Blocks used: SDS L-block v2

Horiz. Servo Settings				Vert. Servo Settings	
P	500	**D_{atten}**	10	**P**	**D_{atten}**
I	80	**Feedback**	512	**I**	**Feedback**
D	10	**E-gain**	700	**D**	**E-gain**

@ 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)		

Experiment Notes

Ppa, Ppb disp and load are switched in mech file

80 Int disp offset

5600 effNS @ 10MPa

15577 ↗ 100Hz, Ppa,Ppb ↗ 2.6 MPa. Ppb ↗ 1.2MPa. Run1, Run2, Run3

504550 effNS @ 12.5 MPa

504900 ↗ 100Hz, Ppa,Ppb ↗ 2.6 MPa. Ppb ↗ 1.2MPa. Run4, Run5, Run6

859600 effNS @ 15 MPa

859900 ↗ 100Hz, Ppa,Ppb ↗ 2.6 MPa. Ppb ↗ 1.2MPa. Run7, Run8

1140000 ↘ 1Hz, refill Ppa, empty Ppb, ↗ 100Hz, Run9

1336600 ↘ 1Hz, Ppa & Ppb ↘ 0MPa, Pc ↘ 0MPa, NS ↘ 1MPa

1398660 effNS @ 17.5 MPa

1399880 ↗ 100Hz, Ppa,Ppb ↗ 2.6 MPa. Ppb ↗ 1.2MPa. Run10, Run11, Run12

1778000 ↘ 1Hz

1783965 effNS @ 20 MPa

1784250 ↗ 100Hz, Ppa,Ppb ↗ 2.6 MPa. Ppb ↗ 1.2MPa. Run13, Run14, Run15

Labview crashed... memory overlflow...begin Part2

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300 ↗ 100Hz, Ppa,Ppb ↗ 2.6 MPa. Ppb ↗ 1.2MPa. Run16 - 19

393000 ↘ 1Hz, effNS @ 12.5MPa

397000 ↗ 100Hz, Ppa,Ppb ↗ 2.6 MPa. Ppb ↗ 1.2MPa. Run20 - 23

640633 redo Run22 after 0.4MPa amp oscillation (2nd in set of 7)

655000 verasonics computer turned off, maybe just screen

640633 redo Run22 after 1Hz