Run 573 log

Flint #12:OK#1 = 2:1 by mass. Prep notes on loose sheet. Final sample composition f=0.713. V10 broken and replaced again, this time with a brand new 150 ksi valve from HIP; P system may or may not be a little leaky. Digital Heise was pressurized to ~260 MPa in previous run. It still seems to give a reproducible voltage, but calibration has clearly changed: 60.0 MPa on analog gives ~62 on digital. P readings here are always analog Heise. Clocks synchronized.			
2/10/09	1700		Intensifier -2.7644 V. Leaking too fast. Dismantle, retighten. 60.0 MPa = 3.08 V from dig Heise (used to be more like 2.965 V before event in previous run).
	1758		Intensifier -3.6869 V.
	1908		Int –1.4956. Stop control, let P drift.
2/11/09	0830		Slipped to ~40 MPa o'nite, leak rate has subsided much, suggesting leak is not sample jacket.
	0836		Back to 60.0 MPa (now 3.11 V). Int –3.5405.
	0904		Int 2.8597 V, so leak ~ same.
	0910		Check P line in for bubbles: none; sample bubbler: none. P to 80 MPa, then let it drift. After ~20 mins drop to >60 and let it finish drifting to 60.0.
	0948		Int –3.6734 V.
	1023		Int –3.4408 V, and I believe has been ~here for 15 mins.
	1046		Unloaded s gauge at 60.0 MPa: -0.007482/-0.007461/<u>7472</u>.
	1048		1st contact: <u>0.6637 V</u>.
	1054	(1a)	s setpt 24 mV (30 MPa); 60 MPa, 223 K.
	1054		Record interval to 30 s.
	1646		Record interval to 60 s.
2/12/09	1252		Put in 100:1 gearing.
2/13/09	1023		Stop. Put in 10:1 gearing.
	1029		Unload.
	1030		Retouch 65 ± 5 s after unload: 1.4729 V. some self-loading.
	1034		Retouch 320 ± 5 s after unload: 1.4633 V. more self-loading.
	1039		Unloaded s gauge at 60.0 MPa: -0.005686/-0.005563/<u>5625</u>.
	1044		Retouch 900 ± 5 s after unload: 1.4587 V. more self-loading.
	1105		Retouch 2178 ± 5 s after unload: 1.4540 V. more self-loading.
	1153		Retouch 5034 ± 5 s after unload: 1.4338 V. more self-loading.
	1224	(1b)	s setpt 24 mV (30 MPa); 60 MPa, 223 K.
	1224		Record interval to 30 s.
	1436		Concern about leak after restroking a coupe of hours ago. Current intensifier position is –2.3066 V.
	1506		Intensifier –1.9498 V.

	1515	Put in 100:1 gearing.
	1611	Intensifier –1.4379 V.
	1702	Intensifier –1.0812 V.
	1756	Int. –3.6721 V (restroked ~1730).
	1826	-3.5930 V.
	1939	-3.4155 V.
		Record interval to 60 s.
2/14/08	0626	Int. –0.6329 V | 1014: +0.1989 V | 1149: 0.3895 | 1458: 0.9113 | 1717: 1.4461 |2200: ~2.5
	2200	Restroke.
2/15/09	0915	Int. -2.5109 V | 1206: -1.8008 | 1946: -0.7600 |
	2040	Restroke. Reduce P set pt from 3.095 V to 3.08 V.
2/16/09	1015	Stop. Put in 10:1 gearing.
	1025	Unload.
	1026	Retouch 75 ± 5 s after unload: 1.5961 V. some self-loading.
	1029	Retouch 242 ± 5 s after unload: 1.5950 V. more self-loading.
	1033	Unloaded s gauge at 60.0 MPa: -0.004366/-0.004272/<u>4319</u>.
	1041	Retouch 960 ± 5 s after unload: 1.5832 V. more self-loading.
	1129	Retouch 3828 ± 5 s after unload: 1.5689 V. more self-loading.
	1135 (1c)	s setpt 24 mV (30 MPa); 60 MPa, 223 K.
	1135	Record interval to 30 s.
	1229	New LN tank acts a little underpressurized. Change P(11) 0.1215->0.2 for an hour or so.
	1346	Put in 100:1 gearing.
	1433	Record interval to 60 s.
2/19/09	1126	Stop. End step (1c). Continue recording for a while, just in case pist disp has that noise problem.
	1143	64 ± 5 s after unload: 1.6762 V. Self loading evident.
	1148	315 ± 15 s after unload: 1.6689 V. Some self-loading.
	1154	Unloaded s gage at 60.0 MPa: -0.003865/-0.003876/<u>3870</u>.
	1215	34:45 ± 15 after unload: 1.6507 V. Maybe a little self-loading.
	1238	3493 ± 5 s after unload: 1.6491 V. negl. self-loading.
	1250	Pressurized to 100 MPa.
	1254	Contact at 1.6815 V (subtract from 1.6491 V = 0.0324 V; add to initial 1st contact). Adjusted 1st contact: <u>0.6961 V</u>. Canonical vessel modulus is ~1.25±0.25/100 x 5 V/50 MPa = 0.0015 V/MPa, or 0.05 ± 0.01 V/40 MPa. Compares sort of ok to 0.0325 just measured here.
	1353	Intensifier –2.1926 V.
	1442	Unloaded s gage at 100.0 MPa: -0.005165/-0.005142/<u>5154</u>.
	1444	Contact: 1.6701 V.

	1452 (2)	s setpt 36 mV (50 MPa); 100 MPa, 223 K. Stop for a while at ~32 mV to make sure no runaway like 565 before proceeding to 36.
	1452	Record interval to 30 s.
	1625	Int. +0.5480
	1713	Int. 1.2536 |1745: 1.7929 | 1842: 2.6905
	2100	Restrokeintensifier; to 120 MPa, wait 10 min and vent to 100 MPa.
	2245	Put in 100:1 gearing.
	2327	Record interval to 60 s.
2/20/09	0628	Intensifier –3.3554 V.
2/21/09	1111	Stop (strain rate taking off). **[When did we back off piston?!?]**
2/22/09	0910	P drop overnight; restroke intensifier and attempt to repressurize to 100 MPa; does not hold well.
	0933	Put in 10:1 gearing.
	0939	Unload. Leak worsens.
	1030	Sample out of vessel; inspect for perforations.
	1145	Sample into gas over LN in storage deward for ~5 min, then all the way in.

2/11/09 1223 hrs 0.056962"/0.022867 (1a) #522
2/11/09 1607 hrs 0.086351"/0.034665 #1800
2/11/09 1847 hrs 0.097076"/0.038971 #2773
2/12/09 0600 hrs 0.118904"/0.047733 #6999
2/12/09 1249 hrs 0.127003"/0.050985 #9548
2/12/09 2105 hrs 0.133466"/0.053579 #12531
2/13/09 1023 hrs 0.143727"/0.057698 #17463
2/13/09 1513 hrs 0.14839 "/0.058145 (1b) #1046
2/13/09 2220 hrs 0.148746"/0.059695 #3539
2/14/09 1015 hrs 0.153341"/0.061558 #7998
2/14/09 2327 hrs 0.156690"/0.062902 #12947
2/15/09 0808 hrs 0.159582"/0.064063 #16213
2/15/09 2030 hrs 0.162927"/0.065406 #20862
2/16/09 0835 hrs 0.166012"/0.066645 #25428
2/16/09 1148 hrs 0.164802"/0.066159 (1c) #81
2/16/09 1802 hrs 0.168360"/0.067565 #2197
2/17/09 1637 hrs 0.173281"/0.069563 #10548
2/18/09 0822 hrs 0.176040"/0.070671 #16396
2/18/09 2114 hrs 0.177726"/0.071347 #21212
2/19/09 1541 hrs 0.188089"/0.075507 (2) #250
2/19/09 2150 hrs 0.210318"/0.084431 #2233
2/20/09 1253 hrs 0.229333"/0.092064 #7532
2/20/09 2015 hrs 0.236436"/0.094916 #10115
2/21/09 1539 hrs 0.252430"/0.101337 #17229