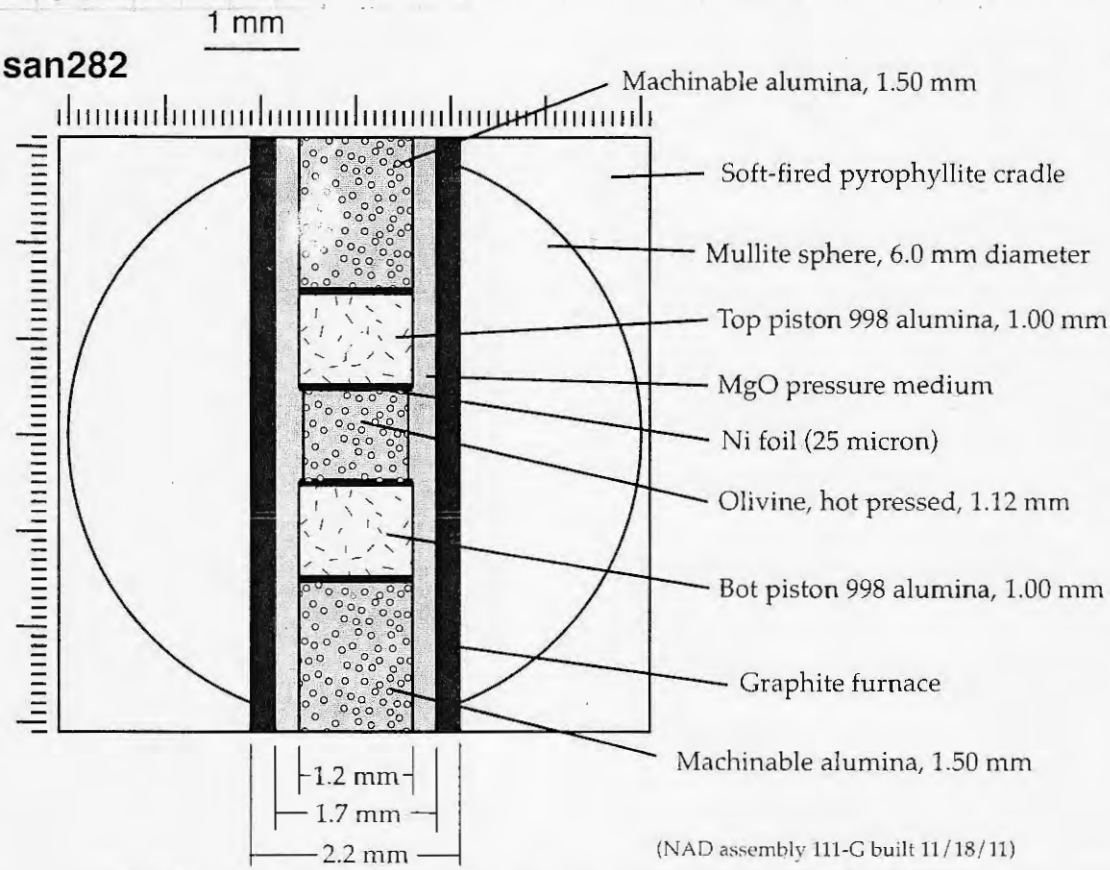
m Page No.

11/20/11 san282



(NAD assembly 111-G built 11/18/11)

Anvils: same as last run; none broken despite blowout

2059 0001.med Al_2O_3 2θ calib

After filling ~~[illegible]~~ LN_2 detector table moves substantially. Re-align and take new Al_2O_3 pattern

~2325 Al_2O_3 2θ Calib, 600s .0002.med

```
1813 SAN__282 [illegible]/20/2011 18:28:54[illegible]
eformation of Dry Polycrystalline Olivine
[illegible]
ase: 18679 [illegible]
pparatus: D-Dia Multielement SSD Imaging with Princeton CCD
```

```
ell: Hybrid mullite and soft-fired pyrophyllite
hermocouples:                0          0
eater: Graphite Cylinder 6300 9200 1700 250
ressure calibrant: sample  Pressure medium: Mullite
) + WC   Truncation: 4   Taper:2
ertical Slit:50  Horizontal Slit:50
:\Mg2SiO4a\SanCarlos\San_282\SAN__282
```

11/21/11

0009 .0003.med open press olivine 600s

~0100: Press closed

0103 McP to 12%, Target 50T

0152 10T

0237 37.7T McP to 10%

0242 41.8T McP to 6%

0255 47.0T l_{ol} (onscreen) = 125.5 min

To Page No.

nessed & Understood by me,	Date	Invented by	Date
		Recorded by:	

n Page No.__ San 282 Continued

11/21/2011

0307 @ 49.9T $l_o l_{(onscreen)}$ = 125 mm

0312 Begin Heating, target 282 W (1100°C)

0334 Logger started (whoops) 10s intervals

0339 Centering in x. Will centered @ x=-8.3

0351 .0004.med 480s (26.9, 26.9, -13.45, 0.2, 0.1) photo #2 $l_o l$ = 125 mm

0359 Jogging Diff. Rams. Expect DVRT response at 36% of Main Ram Load, ~15T

0405 @ 12.7T Diff Ram Load, see typical backwards DVRT response

0408 Diff Rams @ ~ 14.3T (726 Bar) load. Stop jogging and allow a few minutes of annealing

0417 . Diff Rams forward @ 0.004 mm/s Start Step (1) 50T, 1100°C

0419	.0005.med	480s (26.9, 26.9, -13.45, 0.2, 0.1)	photo #3	$l_o l$ = 123 mm
0426	.0006.med	" (")	#4	$l_o l$ = 122.5 mm
0437	.0007	" (")	#5	$l_o l$ = 121.5
0447	.0008	" (")	#6	$l_o l$ = 119
0456	.0009	" (")	#7	$l_o l$ = 117.5
0505	.0010	" (")	#8	$l_o l$ = 115.5
0514	.0011	" (")	#9	$l_o l$ = 113
0523	.0012	" (")	#10	$l_o l$ = 111.5
0533	.0013	" (")	#11	$l_o l$ = 110

0541 Diff Rams Stopped. End Step (1)

0542 $l_o l$ = 107 mm (on screen)

0544 Reduce heater power to 279 W

0545 Check x centering: still excellent / unchanged, x=-8.3

To Page No.____

tnessed & Understood by me,	Date	Invented by	Date
		Recorded by	

n Page No. 11/21/11 San_282 Continued

Temperature Log

t	T (°C)	W	mΩ	
1314	~500	142	49	50T .004 mm/s Step (1)
1316	~600	166	46	
1317	~760	192	44	
3177	~800	211	43	?
318	~960	229		
319	~1000	248	39	
320	1100	282	37	End Step (1) [from p36 start (1) 0417, end 0541]
544	1100	279	35	3W diff at slower speed based on UHN calib D048
1712	1100	279	35	

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		Recorded by	

0555 Diff Runs forward @ 0.001 mm/s Start Step (2)
50T, 1100°C

					NAD	WBD fr pixels
0600	.0014. med	600s	(27.0, 27.0, -13.45, 0.2, 0.1)	im #12	l_{ol} = 106 mm	1.173
0611	.0015,	"	(")	im #13	l_{ol} = 105.5 mm	1.167
0623	.0016	"	(")	im #14	l_{ol} = 105.5	1.155
0636	.0017	"	(")	im #15	l_{ol} = 103.5	1.146
0647	0018			16	l_{ol} =	1.140
0659	0019		(— -13.4898 —)	17		1.131
0710	(x-rays about to ↓)			18		1.119
0748	0020			19		1.086
0759	0021			20		1.080
0810	0022			21		1.071
0822	0023			22		1.068
0832	0024			23		1.051
0843	0025			24		1.042
0854	0026			25		1.033
0905	Stop diff runs End step (2)			26		1.021

0906 ht's off; McP to -5%

0919 Just discovered bot run was still advancing! Take image #27: l_{ol} = 1.021, so maybe no big deal

0920 38T

~~0200~~ ~~McP to -6%~~, diff runs to -0.002 mm/s

0931 32T McP to -6% sample length holding well

0959 15T McP to -8%

1015 7T diff runs to -0.004 mm/s

1027 4T McP to -20%

- aligning sample for next .med -- fear that most of above scans ~1 mm off in x! -8.2, vs -9.2 below (and in prev runs!)

1116 open press ol (wedges out)' ~~0000~~ 0027.med image #28 l_{ol} = 1.030

1149 aligning for 2θ calib, get det 1, 9, 5, 10 max at x = -9.9, -9.2, -9.2, -9.9. Since det 1 is flakey & det 10 a ~~bit~~ bit weak, don't adjust optics, & use x = -9.2

1150 0028.med Al_2O_3 std

~~(image #29 - San 283)~~ → to San 283_0001.

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