

**UWA DATA LOG: SHRIMP ZIRCON U-Pb**

Date: 7/4/96      UWA Mount No.: 96-41      Whose sample?: R. Buick      Operator(s): Jan + April

Indicate any change to the following:		196	204	bkg	206	207	208	238	248	254
<b>Precambrian</b>	Count time (secs):	2	10	10	10	30	10	5	5	2
	Delay time (secs):	7	3	1	2	1	1	3	2	2
<b>Phanerozoic</b>	Count time (secs):	2	10	10	10	10	10	5	5	2
	Delay time (secs):	7	3	1	2	1	1	3	2	2

expected 196-204 = 8.170 amu      expected 204-bkg = 0.040 amu      Dead-time = 32 nanosecs  
 actual 196-204 = 8.167      actual 204-bkg = 0.042      expected resolution = >4200  
 Primary = 2.6 nA      PESABM = — pA      actual resolution = 4980  
 expected Primary : PESABM ≈ 50:1      actual Primary : PESABM = —

Comments: Raster 120μ, 3 min (this is just enough - gold coat is very thick).  
Started with 3 spots on 3 std chips to check for charging problems noted on previous analyses - seems OK  
① checked 206-207-208 offsets  
Stage is vibrating - more noticeable for Pop. C.  
- also for Pop. A esp. outer limits.

Rejection over-ride	Sample/Std ID	Time - printout	UO/U	196 kcps	206 cps	U ppm	204Pb ppb	f <sub>206</sub> %	Age ±1σ (Ma)	206/238	207/206	Corr.
---------------------	---------------	-----------------	------	----------	---------	-------	-----------	--------------------	--------------	---------	---------	-------

	<u>206, 254</u>	<u>sl 541.1-4</u>	<u>11:18</u>	<u>6.43</u>	<u>14.5</u>	<u>1622</u>	<u>—</u>	<u>0.2</u>	<u>0.08</u>	<u>—</u>	<u>555</u>	<u>208 (580)</u>
	<u>207, 208, 248</u>	<u>2-6</u>	<u>11:39</u>	<u>6.23</u>	<u>15.0</u>	<u>1574</u>	<u>233</u>	<u>2.4</u>	<u>0.1</u>	<u>562</u>	<u>527</u>	<u>208 (573)</u>
	<u>196, 206, 208, 238</u>	<u>5-8</u>	<u>11:58</u>	<u>6.38</u>	<u>15.5</u>	<u>1622</u>	<u>216</u>	<u>3.0</u>	<u>0.2</u>	<u>559</u>	<u>571</u>	<u>208 (</u>
	<u>206, 207, 208, 238, 254</u>	<u>u 5418.H1</u>	<u>12:18</u>	<u>6.79</u>	<u>13.5</u>	<u>2600</u>	<u>406</u>	<u>300.</u>	<u>4.4</u>	<u>1207</u>	<u>2997</u>	<u>204</u>
	<del>196, 238</del>	<u>2-1</u>	<u>—</u>	<u>like 1-1</u>	<u>—</u>	<u>abandon</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
	<u>196, 238</u>	<u>3-1</u>	<u>12:46</u>	<u>6.72</u>	<u>15.6</u>	<u>4950</u>	<u>145</u>	<u>84.</u>	<u>2.1</u>	<u>1469</u>	<u>3242</u>	<u>204</u>
	<u>207, 208</u>	<u>4-1</u>	<u>13:05</u>	<u>6.31</u>	<u>15.5</u>	<u>3428</u>	<u>71</u>	<u>6.4</u>	<u>0.2</u>	<u>3060</u>	<u>3233</u>	<u>204</u>
<u>del 1st ThO</u>	<u>206, 208, 238, 254</u>	<u>sl 1-5</u>	<u>13:30</u>	<u>6.49</u>	<u>14.9</u>	<u>1634</u>	<u>216</u>	<u>1.6</u>	<u>0.14</u>	<u>557</u>	<u>534</u>	<u>208</u>
	<del>196, 207, 248</del>	<u>u 5-1</u>	<u>13:51</u>	<u>6.46</u>	<u>14.8</u>	<u>2871</u>	<u>55</u>	<u>6.7</u>	<u>0.2</u>	<u>3167</u>	<u>3251</u>	<u>204</u>
	<u>—</u>	<u>6-1</u>	<u>—</u>	<u>high 204</u>	<u>—</u>	<u>abandon</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
	<u>—</u>	<u>7-1</u>	<u>—</u>	<u>"</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>"</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

Calibra<sup>2</sup> n = 15  
 Zr/U = 1.95434      PA = 10.  
 UO/U = 6.28242      PB = 6  
 Pb<sup>x</sup>/U = 0.202014      PC = 32  
 σ = 1.2777 %

Rejection over-ride	Sample/ Std ID	Time - printout	UO/U	196 cps	206 cps	U ppm	204Pb ppb	f206 %	Age ±1σ (Ma) 206/238	207/206	Corr.	
	196, 204, 206, 248, 254	u B8-1	14:24	6.48	15.7	44.9	136	72.0	1.8	1997	3259	204
		B9-1										high 204 - abandon
	206, 207, 208, 238, 248	B10-1	14:58	7.13	16.6	5865	250	99.0	2.7	1096	3071	204
	206, 238, 254	sl 1-6	15:17	6.20	15.3	1567	233	3.2	0.1	557	568	208
New Sample C	204, 206, 207, 208, 248	u C-11	15:37	6.31	15.1	8000	167	29.0	0.3	3049	3393	204
	207, 208, 238, 248, 254	C2-1	15:57	6.41	15.1	13K	261	19.0	0.2	3029	3305	204
	196, 206, 238	3-1	16:16	6.38	14.6	4220	82	22.0	0.5	3271	3445	204
	206, 207, 238	4-1										high 204 - abandon
		5-1	16:44	6.27	15.7	4542	85	37.0	0.8	3314	3433	204
* will increase when rejection is removed.	196, 206, 207, 208, 238, 254	sl 1-7	17:04	6.21	15.3	1530	233	1.7	0.2	540*	627	204
	196, 206, 207, 208, 238, 248, 254	u 6-1	17:26	6.72	14.6	5312	90	16.0	0.3	3204	3385	204
	206, 207, 238, 248	7-1	17:45	6.15	15.7	4036	82	24.0	0.5	3236	3416	204
	196, 208, 238, 248, 254	8-1	18:05	6.19	16.1	7422	140	37.0	0.5	3340	3422	204
	204, 206, 207, 208, 238, 248, 254	9-1	18:24	6.09	15.6	10K	209	19.0	0.2	3352	3428	204
	206, 207, 238	sl 2-7	18:43	6.32	14.8	1586	230	2.3	0.1	557	536	204
	206, 207, 208, 238, 248, 254	C10-1	19:03	6.31	14.7	2433	41.8	1.8	0.07	3681	36.20	204
	204, 206, 207, 248	C11-1	19:26	6.12	15.1	3916	80.9	5.0	0.03	3354	3443	204
	206, 207, 238, 248, 254	C12-1	19:48	5.94	14.1	10.8K	279	54.0	0.36	3229	3408	204
	254	C13-1	20:07	6.31	14.6	14.8K	391	23.6	0.15	2620	3225	204
	206, 207, 208, 254	C14-1	20:26	6.31	14.6	5157	98.1	6.5	0.12	3401	3422	204
	248	sl 2-8	20:47	6.26	15.3	1603	232	4.2	0.12	552	549	208
1 <sup>o</sup> not very stable. 2 <sup>o</sup> vary	196, 206, 207, 248	C15-1	21:06	6.37	14.8	3698	69.2	8.2	0.20	3413	3449	204
	206, 207, 248, 254	C16-1	21:26	6.22	14.9	6439	127.2	10.8	0.15	3383	3434	204
	196, 206, 248, 254	C16-2	21:46	6.29	15.0	5443	111.9	70.8	1.21	3136	3390	204
	196, 208, 238	C17-1	22:05	6.20	14.9	1809	36.6	8.1	0.39	3347	3457	204

re-accept

Rejection over-ride	Sample/ Std ID	Time - printout	UO/U	196 cps	206 cps	U ppm	204Pb ppb	f <sub>206</sub> %	Age ±1σ (Ma) 206/238	207/206	Corr.
	254 SL 2-9	22:25	6.20	15.4	1958	234	1.8	0.16	549	580	208
196, 206, 207, 208, 238, 254	C.18-1	22:51	6.80	13.2	17.3K	515	72.5	0.48	2132	2827	204
del 1 <sup>st</sup> 206	196 C.19-1	23:11	6.42	14.5	1382	25.5	2.8	0.19	3373	3437	204
	196, 204 C.20-1	23:31	6.11	14.9	3655	77.8	12.3	0.28	3329	3434	204
196, 204, 206, 207, 208	C.21-1	23:51	5.74	14.7	3345	90.0	19.3	0.38	3308	3431	204
196, 248	SL 1-8	24:09	6.19	15.6	1560	229	1.7	0.13	557	557	208
196, 206, 238, 248, 254	C.22-1	24:29	6.18	14.9	3333	68.1	8.5	0.22	3337	3441	204
206, 238, 248, 254	C.23-1	24:47	6.30	14.8	5272	114	75.6	1.3	3045	3407	204
	C.25-1	aborted		Hi 204 Pb							
248, 254	C.28-1	1:07	6.02	15.4	3660	84.1	23.5	0.53	3169	3420	204
196, 204, 207, 208, 254	C.26-1	1:34	6.16	14.8	5129	109	4.7	0.08	3292	3427	204
del 1 <sup>st</sup> ThO	206, 207, 208, 254 SL 1-9	1:54	6.32	15.2	1556	225	1.8	0.12	543	560	208
196, 206, 208, 254	C.27-1	2:14	6.14	15.2	2229	40.4	3.7	0.14	3660	3706	204
196, 204, 248, 254	C.27-2	2:32	6.45	14.7	2773	45.4	3.0	0.10	3624	3707	204
196, 206, 207, 208, 238, 248, 254	C.28-1	2:51	6.57	14.4	10.6K	220	23.6	0.23	2886	3331	204
196, 204, 208	C.29-1	3:13	6.41	16.0	5831	124	36.9	0.67	2777	3376	204
<del>del 1<sup>st</sup> ThO</del>	206 SL 1-10	3:35	6.23	15.1	1498	223	3.2	0.09	553	566	208
196, 204, 248	C.30-1	3:54	6.21	14.5	2160	44.8	4.7	0.18	3348	3438	204
196, 206, 207, 248, 254	C.31-1	4:14	6.38	15.1	7850	160	25.3	0.31	3067	3380	204
del 1 <sup>st</sup> ThO New sample	196, 206, 208 C.31-2	4:32	6.28	15.3	2217	42.5	3.9	0.17	3308	3412	204
196	A.13-2	4:53	6.07	14.5	2850	65.8	6.6	0.19	3244	3315	204 ✓
196, 206, 254	SL 1-11	5:12	6.21	14.3	1422	230	3.8	0.17	545	566	208
206, 238, 248, 254	A.12-2	5:33	5.75	14.2	2719	92.6	30.0	0.73	2796	3295	204 X
196, 206, 208, 238, 248, 254	A.24-1	5:53	6.46	14.6	10.7	202.3	7.6	0.07	3240	3313	204 ✓
196, 208, 248, 254	A.25-1	6:14	6.30	14.4	3810	81.3	4.2	0.10	3168	3314	204 ✓

Rejection over-ride	Sample/Std ID	Time - printout	UO/U	196 cps (K)	206 cps	U ppm	204Pb ppb	f206 %	Age ±1σ (Ma) 206/238 207/206	Corr.
---------------------	---------------	-----------------	------	-------------	---------	-------	-----------	--------	------------------------------	-------

	207 US41A.2-1	6:34	6.14	14.0	3383	80.8	7.0	0.17	3154	3314	204 ✓	
	<del>196, 206, 208</del> 238, 248, 254	SL1-12	6:54	6.51	13.4	1423	212	3.8	544	605	208	
	196, 207, 248, 254 <del>196, 254</del>	A.27-1	7:14	6.30	13.9	1336	29.5	3.9	0.26	3172	3306±9	204 ✓
del 1st U, ThO.	A.28-1	abandoned					Hi	204				
→	196, 254	A.29-1	7:47	6.39	14.5	1078	21.6	1.5	0.13	3195	3314	204 ✓
	<del>196, 204, 206, 208</del>	A.30-1	8:06	6.35	13.8	3049	65.1	6.3	0.18	3212	3323±6	204 older?
	<del>196, 204, 206, 208</del>	A.31-1	abandoned					hi	204			
	196, 206, 204 208, 254	A.32-1	8:32	6.59	13.4	1727	33.7	4.6	0.26	3218	3310±8	204 ✓
	196, 248	A.23-2	8:51	6.34	13.8	2436	51	4.5	0.16	3280	3301±7	204 too young
	196, 204, 206, 208, 238, 254	SL5-9	9:16	6.08	14.5	1469	240	4.9	0.40	566	466	208