

UWA SHRIMP DATA LOG: ZIRCON U-Pb

Date: 10/6/95 UWA Mount No.: 95-12 Whose sample?: A. Ross + R. Buick Operator(s): IRF + AR

Indicate any change to the following:		196	204	bkg	206	207	208	238	248	254
Precambrian	Count time (secs):	2 ✓	10 ✓	10 ✓	10 ✓	40 30	10 ✓	5 ✓	5 ✓	2 ✓
	Delay time (secs):	6 ✓	3 ✓	1 ✓	2 ✓	1 ✓	1 ✓	3 ✓	2 ✓	2 ✓
Phanerozoic	Count time (secs):	2	10	10	10	10	10	5	5	2
	Delay time (secs):	6	3	1	2	1	1	3	2	2

expected 196-204 = 8.170 amu expected 204-bkg = 0.040 amu Dead-time = 36 ¹³² nanosecs
 actual 196-204 = 8.170 ✓ actual 204-bkg = 0.040 expected resolution = >4200
 Primary = 1.8 nA PESABM = 28 pA actual resolution = 5460
 expected Primary : PESABM ≈ 50:1 actual Primary : PESABM = 64

Comments from Log Book: *Grains in photo 65 appear to have 2nd extraction problems, probably due to proximity of the steel - use data with caution. (Leap 7-1 & 8-1).*

Rejection over-ride	Sample/Std ID	Time - printout	196 cps	206 cps	U ppm	204Pb ppb	f ₂₀₆ %	Age ±1σ (Ma) 206/238	207/206	Corr.
Restored all	SL3-25-1	12.17	11K	948	-	2.5	0.2	(std)	-	
Restored all	SL3-24-1	12.41	11K	955	216	2.9	0.2	(std)	-	
delete last scan	SL3-24-2	13.05	91K	758	194	2.2	0.2	std.	-	
Restored all (2)	u512D-1-1	13.29	101K	3145	122	4.2	0.06	3254	3237	
Restored all	u512D-2-1	13.53	10K	3050	102	4.0	0.07	3287	3235	
- do -	SL3-23-1	14.16	111K	960	225	5.0	0.4	std	-	
- do -	SL3-23-2	14.39	111K	923	225	3.1	0.3	std	-	
delete last scan.	u512D-3-1	15.04	8.5K	3935	150	7.9	0.1	3232	3235	
delete last scan	u512D-4-1	15.26	9K	3340	150	9.5	0.1	3300	3258	
Restored all	u512D-5-1	15.49	9K	2260	85	1.3	0.03	3228	3245	
- do -	u512D-6-1	16.11	9.5K	4215	155	6.3	0.08	3236	3253	
- do - (n=1)	SL3-23-3	16.36	101K	872	233	3.0	0.2	std	-	

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

2ry extraction problem; steel too close.

- ditto. -

- spot not a tail, bad original location. Deleted 5% NL. Last 3 scans T204 Delete.

Rejection over-ride	Sample/Std ID	Time - printout	196 cps	206 cps	U ppm	204Pb ppb	f206 %	Age ±1σ (Ma) 206/238	207/206	Corr.
Routine all	u512D-7-1	17-00	8.4K	3500	125	6.0	0.09	3285	3233	
- do -	u512D-8-1	17-23	8.2K	2830	138	5.5	0.08	3160	3232	
all OK	u512D-9-1	17-47	10K	3330	120	4.7	0.08	3193	3228	
- do -	u512D-10-1	18.08	9.6K	2610	91	6.9	0.14	3245	3248	
all restored	513-23-4	18.31	9.8K	888	233	3.5	0.28	std	-	
all restored	4512A-12-1	19.05	9.5K	12385	297	139	1.3	2699	2376	
Deleted 5% NL	4512A-13-1	19.29	9.5K	3014	838	1488	30.2	3012	2246	
all restored	513-27-8	19:52	9.8K	852	233	58	0.46	(std)	-	
deleted scans 17.7	4512A-13-1	-	abandoned high common lead				-	-	-	
	4512A-13-2	20:26	10K	2151	86.7	225.2	60	2834	2651	
	4512A-14-1	-	abandoned high common lead				-	-	-	
Restored all	4512A-15-1	21:05	9.5K	3128	98.3	732	1.9	2636	2634	
	4512A-15-2	-	abandoned high common lead				-	-	-	
Restored all	4512A-16-2	21:43	9.0K	2663	139	21.7	0.47	2437	2570	
	4512A-16-1	-	abandoned high common lead				-	-	-	
Restored all	4512A-17-1	22:29	9.9K	590	27.6	3.4	0.36	2718	2732	
all restored	513-27-9	22:58	9.4K	818	226	1.2	0.10	(std)	-	
all restored	4512A-18-1	23:22	8.6K	6653	297	38.6	0.40	2421	2581	
all restored	4512A-19-1	23:50	9.1K	1754	83.5	31.5	0.98	2726	2779	
Note abundant rejects T204! Took out scan 4.	4512A-20-1	0:13	6.9K	74K	2470	465	0.55	2597.1	2359.8	
all restored	4512A-21-1	0:38	8.2K	11097	444	237	1.8	2322	2354	
all restored	4512A-22-1	1:03	9.7K	2743	120	22	0.50	2751.8	2715.9	
all restored	513-27-10	1:28	9.1K	853	229	7.5	0.62	(std)	-	
no rejects!	4512A-23-1	1:56	9.4K	869	40	7.1	0.46	2677	2729	
all restored	4512A-4-2	2:20	78K	18K	653	166	0.85	2388	2279	

NL = non linearity

11/11/10

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	Delay time (secs):	6 ✓	3 ✓	1 ✓	2 ✓	1 ✓	1 ✓	3 ✓	2 ✓	2 ✓
Phanerozoic	Count time (secs):	2	10	10	10	10	10	5	5	2
	Delay time (secs):	6	3	1	2	1	1	3	2	2

expected 196-204 = 8.170 amu expected 204-bkg = 0.040 amu Dead-time = 36 nanosecs
 actual 196-204 = actual 204-bkg = expected resolution = >4200
 Primary = nA PESABM = pA actual resolution =
 expected Primary : PESABM ≈ 50:1 actual Primary : PESABM =

Comments from Log Book:

Rejection over-ride	Sample/ Std ID	Time - printout	196 cps	206 cps	U ppm	204Pb ppb	f ₂₀₆ %	Age ±1σ (Ma) 206/238	207/206	Corr.
—	4512A-4-3	—	abandoned, High common Pb						—	
all restored	4512A-24-1	2:53	8.8K	9127	329	70.3	0.63	2499	2554.4	
all restored.	513-27-11	3:15	9.3K	873	228	5.6	0.46 (std)	—	—	
all restored.	4512A-25-1	3:37	8.8K	3727	1664	81.9	1.3	2665	2786.5	
all restored	4512A-26-1	4:01	8.6K	7180	247	60.5	0.84	2258	2398	
—	4512A-27-1	—	abandoned, high common Pb						—	
—	4512A-28-1	—	abandoned, high common Pb						—	
all restored	4512A-17-2	4:42	9.1K	586	241	9.8	0.21	2785	2752	
all restored	4512C-14-1	5:13	9.1K	946	49.4	19.9	1.2	2524	2723	
all restored - primary dropped 4014 nA	513-27-12	5:37	8.3K	772	209	3.6	0.15 (std)	—	—	
—	4512C-15-1	—	abandoned, high common Pb						—	
all restored	4512C-16-1	6:15	9.4K	1084	52	11.7	0.12	2557	2722	

See previous sheet.

Populatⁿ C: Clast
 S13 27-12, 28-2, 23-5
 Zr/U: 170774
 Uo/U: 5.50608 n=3
 Pb*/U: 0.163509 2.4163 std dev.

Rejection over-ride	Sample/ Std ID	Time - printout	196 cps	206 cps	U ppm	204Pb ppb	f206 %	Age ±1σ (Ma) 206/238	207/206	Corr.
	all restored 4512C-17-1	6:38	9.2K	1280	41	326	15.8	3374	35771 35771	
	4512C-18-1	7:04	8.9K	694	32	163	15.0	2465	3550	
NL = all restored	4512C-19-1	7:28	8.9	1501	58	1.8	0.08	2663	2673	
- no change -	4512C-20-1	7:52	8.8	389	15	1.7	0.26	2772	2758	
	S13-29-1	- had to abandon								
	all restored S13-25-2	8:31	9.1K	891	197	4.8	0.46	(std)	-	
- No Δ -	4512C-21-1	9:00	9.0K	1654	61.2	3.9	0.06	2646	2682	
all restored	4512C-22-1	9:26	9.1	531	22.6	6.8	0.85	2541	2784	
NL) all restored	4512C-23-1	9:50	9.0K	1538	67.2	130.1	5.1	2583	3069	
	4512C-24-1	-	low	U 238+234 counts				as above		
	4512C-25-1	-	-	-	-	-	-	-	-	
all restored	4512C-12-2	10:25	9.2K	1434	56.5	30.2	1.71	2371	2768	
	S13-23-5	10:48	8.5K	832	200	4.9	0.46	(std)	-	
	4512C-13-2	11:14	9.3K	553	14.9	1.4	0.36	2006.5	2763.4	
<p> Note: Row out of all restored standards. ∴ spot poorly placed - see photo. - deleted 238 scan 1, rest restored. </p>										
<p> KB588 1.9509% = 1 std dev 17 analyses on 6 stds Zr/U = 1.65810 Uo/U = 5.27061 Pb*/U = 0.149819 </p>										