

UWA SHRIMP LOG SHEET

Date 1/10/07 **UWA mount no(s)** 07-16 **Mineral(s)** ZR **Whose sample?** Me N **Operator(s)** Me N + Nick

Notes: Masses in **bold** = peak centred; others = offset from lower mass centred peak (see offsets below).

Zircon/Badd.	196	204	204.1	206	207	208	238	248	254
Count time (secs)	2	10	10	10/20	30/10	10	5	5	2
Delay time (secs)	8	3	1	4	2	1	3	2	2
Centring (secs)	3	-	-	3	-	-	3	3	2

Titanite/Perovskite	200	204	204.1	206	207	208	248	254	270
Count time (secs)	2	10	10	10/20	30/10	10	5	5	7
Delay time (secs)	8	3	1	4	2	1	4	2	3
Centring (secs)	3	-	-	4	-	-	4	3	3

Monazite (SHB)	202	203	204	204.1	206	207	208	232	254	264	270
Count time (secs)	2	2	10	10	10/20	30/10	5	5	2	2	2
Delay time (secs)	8	1	1	1	4	2	2	4	3	3	2
Centring (secs)	1	2	-	-	4	-	2	2	2	2	2
Cup in/out (SHA) out								in	out	in	

Xenotime (SHB)	194	(196)	204	204.1	206	207	208	238	248	254
Count time (secs)	2	(5)	10	10	10/20	30/10	5	5	5	2
Delay time (secs)	8	(2)	3	1	4	2	1	3	2	2
Centring (secs)	1	-	-	-	4	-	-	4	3	2

MASS OFFSETS (record setup offsets for session, and **check them after each analysis**).
 Note: Setup offsets are different for SHRIMP A and B: i.e. 206-207 = 1.001 for A and 1.005 for B.

Zircon/Badd.	196-204	204-204.1	204-206	206-207	206-208	
Expected offsets:	8.170	0.045	~2.001/9	1.001/5	2.001/9	
Setup offsets:	8.160	0.045	~2.010	1.004	2.007	
Titanite/Perovsk.	200-204	204-204.1	204-206	206-207	206-208	
Expected offsets:	4.136	0.045	~2.001/9	1.001/5	2.001/9	
Setup offsets:						
Monazite (SHB)	202-203	203-204	204-204.1	204-206	206-207	206-208
Expected offsets:	~1.000	1.110	0.045	~2.001/9	1.001/5	~2.001/9
Setup offsets:						
Xenotime (SHB)	(194-196)	194-204	204-204.1	204-206	206-207	206-208
Expected offsets:	1.998	10.143	0.045	~2.001/9	1.001/5	2.001/9
Setup offsets:						

Deadtime 2.5 ns **Kohler aperture** 100? **Retard**volts **Resoln** 5582

Primary on Steel: O⁻ bits & nA O₂⁻ bits & nA

Primary O₂⁻ on: epoxy = 2.3 nA; standard = 3.0 nA; **PESABM** on std = 60 pA

Raster: Time (mins): 2.5 Aperture: 160 No. of scans: 5

Useful information	MONAZITE	XENOTIME
CZ3 = 564 Ma & 551 ppm U	French = 514 Ma & 1000 ppm U	MG1 = 490(?) Ma
Temora 2 = 417 Ma & ~130 ppm U	PD95 7/6 age = 1698(?) Ma	BS1 = 507(?) Ma
Khan = 518 Ma & 700 ppm U	Z2908 7/6 age = 1795(?) Ma	Xeno1 = 994 Ma & 7/6 age = 997 Ma
SDA : 7/6 age = 3578+/-4 Ma	QMa = 505(?) Ma	
BR266 : 559 Ma & 903 ppm U		

254 → 40% @ 180kHz = 380 ppm U

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ID	Time	Uo/U 254/238	196 Keps	206 CPS	U ppm	f ₂₀₆ %	Sensit.	Age 206/238	Age 207/206	offset OK?	Comments SBM/Rang C1
BR.1-1	10:09	7.19	23	4900	903	.23	23.9	558±5	482±43	✓	7.8 (one spin)
BR.1-2	10:24	7.44	22	4800	910	.05	26.3	536±19	529±29	✓	10.8 (noisy)
				- increased Duo to ~900 to try & stabilize -							
BR.1-3	10:46	7.62	17	4000	896	.08	24.1	554±7	508±22	✓	5.4 SE
A.124	11:10	7.29	16	3200	110	.13	21.3	3421±35	3841±10	✓	5.5 31
A.125	11:27	7.63	17	1000	302	.04	24.5	3543±60	3448±6	✓	4.9 "
A.126	11:43	7.51	17	9400	265	.03	23.6	3658±40	3654±6	✓	5.2 "
BR.1-4	12:00	6.33	21	3400	841	.07	22.9	530±7	576±37	✓	3.6 Photo 31 SE 31
A.127	12:17	7.38	16	5800	172	.03	22.4	3594±32	3688±5	✓	4.5 31
A.128	12:41	7.57	17	8900	230	.05	24.6	3818±46	3758±19	✓	5.8 "
BR.1-5	12:57	7.37	18	4000	905	.07	23.6	565±12	552±30	✓	late step 5.2
				→ increased Duo P again -							
BR.1-6	13:13	7.28	16	3500	911	0.03	24.0	549±11	585±23	✓	3.6
				→ increased Duo P again -							
BR.1-7	13:29	7.95	12	2800	909	0.16	25.8	535±3	524±24	✓	4.7
A.129	13:56	7.57	12	3700	134	0.14	24.9	3738±43	3864±6	✓	stepping down sc. 2, 3, 4. 4.8
A.130	14:15	7.64	13	6500	230	.10	25.6	3723±43	3839±3.8	✓	step sc 1, 2. SEM. 5.6 33
A.131	14:39	7.49	11	2100	112	.23	22.1	3044±56	3651±8	✓	3.7 35
A.132	15:08	7.78	12	2300	94	.29	25.0	3691±76	3658±9	✓	1.9 50.
A.133	15:25	7.60	12	4200	174	0	24.4	3537	3792	✓	8.1 50.
A.134	15:47	7.39	12	6200	312	.13	24.7	3139	3551	✓	1.8 51
A.135	16:09	7.43	10	6300	301	.15	22.8	3538	3939	✓	2.5 51
BR.2-1	16:28	8.01	9.9	2600	973	.14	25.5	563±4	561±30	✓	1.7
BR.2-2	16:47	7.60	9.7	2300	989	.03	23.7	524±3	594±30	✓	1.4
A.136	17:06	7.39	10	2000	98.5	.34	23.6	3538±49	3736±11	✓	1.6 51

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ID	Time	Uo/U 254/238	196 Keps	206 CPS	U ppm	f ₂₀₆ %	Sensit.	Age 206/238	Age 207/206	offset OK?	Comments
A137	17:28	7.22	10	2500	127	.16	23.2	3548	3653	✓	SEM var. SEM 3.7 51
A.138	17:58	7.67	9800	5300	252	.12	24.7	3550 ± 30	3678 ± 7	✓	3.8 51
A.139	18:10	8.06	9.0	9300	448	.10	26.0	3597 ± 24	3642 ± 6	✓	3.6 51
A.140	18:28	7.83	9.2	5500	286	.22	24.9	3446 ±	3549 ± 17	✓	1.6 51
A.141	18:49	5.80	10	1900	131	-.24	17.9	3424 ± 37	3709 ± 10	✓	3.4 52
BR.2-3	19:08	8.06	8.8	2300	958	.20	25.2	546 ± 4	532 ± 32	✓	2.3
BR.2-4	19:29	7.23	9.5	2000	975	.17	23.2	505 ± 6	531 ± 38	✓	3.5
A.142	19:52	6.96	9.1	4300	264	-.03	21.9	3469 ± 29	3654 ± 6	✓	3.7 52
A.143	20:15	6.64	9.4	1700	93	.16	22.4	3836 ± 198	3708 ± 31	✓	4.2-5 15. 52
A.144	20:46	7.35	8.9	2500	141	-.07	23.9	3557 ± 48	3681 ± 11	✓	-ve spikes 3.9 53
A.145	21:09	7.46	7.8	1300	81	-.54	22.1	3564 ± 101	3653 ± 18	✓	12.2 53.
Adjusted Pressure ↑ from ~170 to ~1050											
BR.2-5	21:28	6.82	7.8	1500	974	.38	21	504 ± 4	518 ± 50	✓	4.1
BR.2-6	21:46	8.83	4.6	1300	954	-.22	25.1	507 ± 8	589 ± 35	✓	3.0
BR.2-7	22:09	8.53	5.3	1500	967	-.77	25.2	538 ± 5	434 ± 71	✓	2.9
BR.2-8	22:39	8.36	6.0	1600	964	-.18	25.6	534 ± 5	517 ± 47	✓	4.1 3.6
A.146-1	22:57		7/6 Ratio, aborted.							✓	2.6 3.6
A.147-1	23:15	6.61	6.8	2300	187	.36	20.2	3650 ± 52	3882 ± 11	✓	2.2 54.
A.148-1	23:42	7.45	6.9	1200	83	.42	23.1	3542 ± 70	3693 ± 14	✓	4.7 54.
A.149-1	00:04	7.69	6.5	5600	522	.16	23.5	2884 ± 27	3610 ± 8	✓	2.5 54
A.150-1	00:27	7.88	6.4	2500	177	-.23	24.8	3588 ± 46	3667 ± 11	✓	4.1 55.
BR.2-9	00:54	8.32	6.0	1700	970	.14	25.5	553 ± 5	558 ± 50	✓	2.5
BR.2-10	01:22	8.81	5.3	1500	978	-.07	26.0	520 ± 6	570 ± 33	✓	3.1

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ID	Time	Uo/V 254/238	196 Keps	206 CPS	U ppm	f206 %	Sensit.	Age 206/238	Age 207/206	offset OK?	Comments
A151	01:42		High 206, aborted								SEM Ver. 2 SEM # 56
A.152	02:06	7.28	6.3	1100	89	.17	22.2	3545±63	3732±12	✓	2.5 56
A.153	02:31	7.76	6.2	1800	133	.105	23.0	3580±53	3729±9	✓	1.8 57
A.154	02:38		High 206, aborted							✓	1.0 57
A.155											
A.156											
A.157	03:04	7.56	6.6	2500	170	.09	23.5	3788±56	3873±16	✓	4.1 57
BR.2-11	03:22	8.59	6.0	1700	954	.63	26.3	537±8	450±48	✓	3.8
A.158	03:39	3197	6.8	5000	180	.29	24.0	3197±46	3618±18	✓	3.0 57
A.159										✓	1.1
A.160	04:04	7.57	7.3	3500	253	.29	23.7	3363±54	3653±22	✓	3.6 58
A.161		Good	7/6,	high	206.					✓	0.6.
A.162	04:29	7.65	7.1	3200	263	.12	23.7	3025±32	3494±10	✓	2.1
A.163	04:50	7.62	7.3	1300	80	.37	24.2	3673±65	3862±16	✓	1.2 59
A.164	05:09	8.15	7.0	1800	117	.56	26	3671±67	3684±12	✓	3.8 59.
A.165	05:28	7.50	7.3	1100	72	.10	23.4	3617±66	3816±15	✓	2.5 59.
BR.2-12	05:47	7.60	7.6	1800	987	.06	24	536±6	556±35	✓	3.3
BR.2-13	06:04	8.25	7.0	1800	974	.10	25.8	518±8	655±27	✓	13.2
A.166	06:22	7.86	7.0	3500	262	.33	24.3	3368±52	3607±19	✓	3.7 60
A.167	06:39	7.58	6.8	4600	722	.15	21.9	3364±32	3632±6	✓	2.8 60
A.168	06:57	7.72	7.6	3100	191	.30	24.4	3533±47	3670±8	✓	2.4 61
A.169	07:17	7.29	7.6	2600	151	.12	22.6	3637±45	3795±8	✓	2.0 61
A.170	07:35	8.22	7.2	3600	251	.18	25.1	3137±51	3606±9	✓	4.9 61
BR.3-1	07:55	8.62	7.4	1900	410	.14	26.7	538±7	564±38	✓	2

