

RUTILE & trace elements: SHRIMP data acquisition logsheet **SHRIMP A or B** Primary beam **O<sup>-</sup>** or **O<sub>2</sub><sup>-</sup>**

Date	Sample/Mount(s)	Sample owner	SH operator	Night-runner(s)
15/11/16	08-03 N16-36	McN	CT	AUTO

Deadtime.....ns Kohler aperture..... Retard.....<sup>100</sup>.....volts Resoln..... Primary on steel: O<sup>-</sup> .....Bits/nA O<sub>2</sub><sup>-</sup> .....Bits/nA

Primary O<sup>-</sup> on: epoxy .....nA standard .....nA PostESA BM on std ..... Raster: Time (mins) ..... Aperture ..... No. of scans .....

Rutile	132	137	152	192	200	204	206	207	208	216	248	254	270
Count time (secs)	Ti2O2	SbO	SnO2	Ti3O3	WO	Pb	Pb	Pb	Pb	WO2	ThO	UO	UO2
Delay time (secs)	2	3	3	2	2	10	10/20	30/10	10	4	5	5	3
Pk centring time (secs)	10	4	4	8	4	4	4	2	2	4	4	2	3
	3	-	-	3	3	-	6	-	-	4	-	3	3

Offsets	132-137	132-152	132-192	192-197	200-204	204-Bk	204-206	206-207	206-208	206-WO2	206-216	216-248
Rutile	5.061*	9.781	~60.234	~8.098	4.040	0.045	~2.009	1.004	2.010	206-216	~9.981	32.025
Expected offset												
Setup offsets	5.061	9.781	60.243	8.097	4.039	0.044	~2.009	1.004	2.012	9.982	32.025	
	5.063	19.883										

⊖ = no peak centring!

Notes: ..... Use Universal Line Fit

Setups: WH and WOD have enough W and Ta to peak-centre, but not enough Sn or Sb to peak centre; however, WOD can be scanned for Sn and Sb; NBS611 has enough Sb to set the 137 peak.

No peak centring on 248.....check peak position on NBS611 or zircon or titanite

# 197 is a doublet... use low mass peak/shoulder \* 137 is a doublet....use high mass peak/shoulder

Rutile Standards:

- WH (Windmill Hill) quartzite
- 207Pb/206Pb age = 2642 Ma
- 206Pb/238U age = 2625 Ma
- U-content = 164 ppm U
- WOD (Wodgina)
- ????
- 2845.4 +/- 0.5 Ma
- 165 ppm U

# #  
132-181  
49.632

3:46 pm  
10pm  
16/11/16

Date 15/11/16

Mount 08-03 4 N16-36

Page no. 15

9/14

10 (WA)

Mount	Filename	Time	Ti	Sb	Sn	Ta	W	Pb	Pb	Pb	Th	U	Ti/Ti	204/206	UO2/UO	Pb/U	Age/Ma	SMB
			Kcps	cps	cps	cps	cps	cps	cps	cps	cps	Kcps	132/192	x10 <sup>4</sup>	270/254	206/206	207/206	%
08-03	WH.2-1	14:01	93	15	17	1500	900	86K	9.6	0.5	27				0.59		2634	
"	"	14:27	94	25	40	1400	670	71K	8.1	0	22			.14	0.59		2636	
"	"	15:00	110	31	31	1900	810	86K	15	0.7	28				0.58		2633	
N16-36	B.1-1	15:46	110	7.6	46	86	22K	12K	9.8	0.6	3.9			9.3	0.59		2598	
08-03	WH.5-1	17:51	110	20	50	430	910	6400	1.3	0.1	7.1			0	0.59		2630	24.1
"	WH.6-1	18:17	100	33	50	250	1000	7800	2.8	0.5	8.0			.13	0.62		2619	29.9
"	WH.7-1	18:43	120	26	59	350	1000	8200	2.0	0.7	8.8				0.58		2663	26.6
N16-36	A.1-1	19:16				tripped multiplier												5.2
"	B.1-1	19:42	110	9.0	40	40	22K	1200	1.8	0.1	1.3			0.9	0.60	0.53	2606	11.3
"	C.1-1	20:08	79	1800	1700	110K	2100	48	3.5	0.2	.044			41.9	1.52	1.67	3109	8.0
08-03	WH.8-1	20:44	120	110	26	130	41K	2900	1.2	0	3.0			0.17	0.59	0.56	2641	22.4
N16-36	D.1-1	21:12	54	4500	2400	100K	1500	100	18	0.5	.56			76.9	1.96	0.36	2099	3.6
"	E.1-1	21:43				tripped multiplier												5.1
"	A.2-1	22:15	67	6400	2100	73K	2300	1100	400	0.4	.68			55.1	1.66	2.68	3387	5.6
08-03	WH.9-1	22:42	110	20	55	260	940	6800	1.1	0.2	7.1				0.62	0.59	2640	26.1
N16-36	B.8-2	23:09	140	53	72	38	42K	2500	4.0	0	2.6			.73	0.70	0.67	2583	14.2
"	C.2-1	23:35	63	2300	1700	200K	2800	63	4.8	0	.056				1.52	1.70	2988	5.4
"	D.2-1	00:00	55	5700	2600	110K	1700	55	12	.17	.34				2.00	0.32	2102	5.0
08-03	WH.10-1	00:27	130	25	72	340	1300	11K	1.3	0.1	11				0.61	0.59	2626	16.9
N16-36	A.1-2	01:01				tripped multiplier												5.5
			Reset Multiplier Manually															
08-03	WH.17-1	08:30	120	36	67	250	1000	11K	4.7	0.9	12			.12	0.62	0.60	2628	24.3
N16-36	E.1-2	09:04	45	6100	3800	87K	5800	7100	2100	0.5	4.3			14.5	1.97	0.33	2478	8.6

\* →

\* Changed from TaO to Ta

Date ..... 16/11/16

Mount 08-03 + N16-36

Page no. .... 2

1° (nA)

Mount	Filename	Time	Ti Kcps	Sb cps	Sn cps	Ta cps	W cps	Pb cps	Pb cps	Th cps	U Kcps	Ti/Ti 132/192	204/206 x10 <sup>4</sup>	UO <sub>2</sub> /UO 270/254	Pb/U 206/208	Age/Ma 207/206	SMB %
N16-36	J.7-3	09:28	130	34	34	210	28K	7100	11	0.1	6.7	0.11	0.59	0.62	2851	27.8	
08-03	WH18-1	09:55	120	19	45	310	970	8300	1.1	0	8.6	-	0.59	0.57	2638	17.1	
"	"	16-2:10:20	120	21	49	300	890	8800	1.3	0.07	9.1	0	0.59	0.57	2623	25.6	
SAMPLE CHANGE → NEW FOLDER (N16-38 & 39 = BOPD)																	
08-03	WH18-1	12:27:48	23	33	33	160	420	3500	1.3	0.14	3.7	-	-	-	-	2	
"	WH19-1	12:52												0.561	2642	23.9	5.1



