

Supplementary data Table C: U-Pb grain age data. Discordant grains removed.

Grain No.	U (ppm)	Th/U	Uncorrected ratios		207Pb/235U ± s.e.	207Pb/206Pb	
			206Pb/238U	± s.e.			
<b>SAMPLE MW1</b>							
G13	180.3	0.73	0.5978	0.0054	15.8100	0.2231	
G8	134.9	0.48	0.4069	0.0039	6.4835	0.1378	
G5	1278.4	0.30	0.0726	0.0007	0.5803	0.0579	
G1	532.6	0.11	0.4489	0.0039	9.3146	0.1508	
G6	488.5	0.50	0.3507	0.0031	5.5267	0.1228	
G10	783.6	0.24	0.3459	0.0030	5.6139	0.1192	
G39	331.2	0.97	0.0256	0.0003	0.1781	0.0563	
G50	905.6	0.00	0.0335	0.0003	0.2400	0.0545	
G47	300.5	0.39	0.0422	0.0005	0.2910	0.0548	
G42	792.8	0.19	0.3289	0.0029	5.8508	0.1279	
G60	899.0	0.41	0.3413	0.0030	5.2744	0.1148	
G61	523.2	0.43	0.3380	0.0030	5.0858	0.1151	
G53D	538.8	0.09	0.3007	0.0027	4.6213	0.1147	
G59	1124.7	0.06	0.2962	0.0026	4.6391	0.1139	
G56	195.0	0.36	0.0494	0.0006	0.3319	0.0542	
G73	88.1	0.63	0.2039	0.0024	1.6679	0.0821	
G72	684.9	0.29	0.3204	0.0028	4.8054	0.1136	
<b>SAMPLE MW4</b>							
G1	835.7	0.43	0.0403	0.0004	0.2828	0.0515	
G6	536.0	0.64	0.0316	0.0003	0.2066	0.0503	
G12	312.0	0.96	0.3818	0.0036	5.1942	0.1169	
G11	475.3	0.19	0.3137	0.0028	4.7814	0.1159	
G15	236.7	0.60	0.1548	0.0015	1.2615	0.0708	
<b>SAMPLE SC3</b>							
SC40	514	0.45	0.03572	0.9	0.26088	1.3	0.05301
SC41	295	0.66	0.34237	0.8	5.28021	1.1	0.11276
SC42	600	0.26	0.42603	0.8	8.96403	1	0.15298
SC39	166	0.49	0.33422	0.9	5.03417	1.9	0.11301
SC33	258	0.41	0.04273	1	0.31309	2.1	0.05473
SC37	172	0.23	0.46128	0.8	8.78281	1.5	0.14576
SC28	95	1.24	0.13129	0.9	1.15213	2.2	0.06742
SC24	116	0.19	0.33305	0.9	4.63345	1.7	0.10703
SC25	438	0.31	0.03563	0.9	0.23957	1.5	0.05083
SC30	391	0.06	0.32479	0.8	5.18953	1.1	0.11758
SC29	182	0.41	0.04234	1	0.29417	2.2	0.05212
SC32	134	0.52	0.26819	0.9	3.30689	1.5	0.09421
SC15	294	0.46	0.01747	1	0.1279	2.2	0.05402
SC16	556	0.1	0.32247	0.8	5.00027	1.2	0.11276
SC23	304	0.21	0.32315	0.8	4.80341	1.2	0.11317
SC33	106	0.75	0.13365	0.9	1.12965	2.1	0.06483
SC22	53	0.77	0.14906	1	1.47936	2.9	0.08246
SC14	159	0.3	0.34825	0.9	5.21898	1.5	0.11297
SC13	145	0.27	0.03052	1.1	0.20794	3	0.05074
SC21	223	0.74	0.01441	1.2	0.09238	3.6	0.04814
SC20	68	1.38	0.29693	0.9	3.61545	2.3	0.09694
SC18	166	0.25	0.04445	1.1	0.31854	3	0.05308
SC19	796	0.42	0.02977	0.9	0.21082	1.3	0.05153
SC34	1429	0.34	0.00573	1	0.03855	2.2	0.05044
SC35	89	0.34	0.38087	0.9	5.56057	2.2	0.11997
SC38	167	1.09	0.34688	0.9	5.29302	1.6	0.11505
SC2	471	0.33	0.30541	0.9	4.73434	1.9	0.11235
SC1	337	0.3	0.48363	0.9	11.64258	1.4	0.17509
SC3	166	1.17	0.17281	0.9	1.65209	2	0.0727

SC7	869	0.34	0.02623	0.9	0.18501	1.3	0.05219
SC6	122	0.75	0.13914	0.9	1.24433	1.9	0.06848
SC12	138	0.37	0.50803	0.9	10.82098	1.8	0.16716
SC10	333	0.5	0.03167	1	0.22329	2	0.05238

**SAMPLE SC4**

4SC8	113	0.63	0.13794	0.9	1.37243	2.2	0.07691
4SC9	301	0.37	0.29998	0.9	4.54857	1.3	0.11228
4SC10	375	0.58	0.02074	1	0.14131	1.9	0.05052
4SC11	93	0.44	0.13741	0.9	1.29675	2	0.07413
4SC13	114	1.22	0.16638	0.9	1.57951	2.2	0.07245
4SC23	277	1.44	0.02022	1	0.14858	2.2	0.0553
4SC25	71	0.65	0.13778	0.9	1.19051	2.1	0.06757
4SC26	398	0.45	0.45834	0.8	10.37962	1	0.16314
4SC28	130	0.01	0.03831	1	0.26182	2.5	0.05291
4SC29	161	0.47	0.07654	1	0.59309	2.4	0.05998
4SC30	106	0.46	0.04428	1.1	0.30698	3.1	0.05246
4SC31	209	0.41	0.01645	1.2	0.10731	3.3	0.0493
4SC32	71	0.84	0.35759	0.9	5.27449	2.2	0.11764
4SC35	219	0.57	0.03584	0.9	0.24918	1.8	0.05119

$\pm$ s.e.	Uncorrected ages (Ma)					
	206Pb/238U	$\pm 2\sigma$	207Pb/235U	$\pm 2\sigma$	207Pb/206Pb	$\pm 2\sigma$
0.0016	3020.8	48.8	2865.4	27.3	3003.1	18.7
0.0012	2200.5	40.5	2043.7	28.7	2199.7	21.4
0.0006	451.9	13.1	464.6	15.0	524.1	13.0
0.0010	2390.4	40.1	2369.5	25.2	2355.2	17.0
0.0009	1937.7	34.8	1904.8	24.9	1997.3	17.6
0.0008	1915.0	34.3	1918.2	24.3	1943.5	16.9
0.0015	162.6	9.0	166.4	15.0	462.2	24.9
0.0009	212.1	9.4	218.4	13.0	393.4	15.8
0.0016	266.4	11.7	259.4	20.6	405.7	24.5
0.0009	1833.1	33.4	1954.0	24.7	2069.7	17.5
0.0007	1893.0	33.7	1864.7	23.8	1876.9	16.3
0.0008	1876.8	34.0	1833.7	24.7	1881.0	17.5
0.0008	1694.6	31.5	1753.1	24.2	1875.2	17.3
0.0008	1672.4	31.0	1756.3	23.7	1862.1	16.8
0.0015	310.7	12.5	291.0	22.0	381.0	23.2
0.0016	1196.1	31.0	996.4	37.5	1248.9	33.3
0.0008	1791.7	32.7	1785.8	24.1	1858.1	17.0
0.0009	254.6	6.9	252.9	10.9	264.2	10.0
0.0011	200.2	6.1	190.7	10.9	209.8	10.4
0.0012	2084.9	35.1	1851.7	25.7	1908.7	19.0
0.0010	1759.0	29.5	1781.6	23.4	1894.1	17.4
0.0010	927.5	19.0	828.6	23.5	951.9	20.0
1.1	226.2	1.2	235.4	7	329.2	24.9
0.6	1898.1	2.1	1865.7	112.3	1844.4	11.5
0.6	2287.8	0.9	2334.3	169.4	2379.5	10.4
0.8	1858.8	0.8	1825.1	179.5	1848.4	13.9
1.6	269.7	2.8	276.6	13.1	401.2	36.1
0.7	2445.2	1.5	2315.7	243.6	2296.8	11.4
1.2	795.2	0.7	778.2	50.2	850.8	25.3
0.7	1853.1	2.8	1755.3	152	1749.4	13.8
1.2	225.7	0.7	218.1	7.2	233.1	28.2
0.6	1813.1	0.7	1850.9	106.2	1919.8	11.5
1.7	267.3	2.2	261.8	13.1	290.7	39.5
0.8	1531.6	3	1482.7	97.6	1512.3	14.3
1.9	111.6	1.7	122.2	5.8	371.9	43.8
0.7	1801.8	0.7	1819.4	111.2	1844.4	12.1
0.7	1805.1	1.8	1785.5	107.7	1850.9	12.2
1.2	808.7	3.8	767.6	46.9	768.8	25.1
1.4	895.7	0.9	922	82.9	1256.5	28.3
0.7	1926.2	3.4	1855.7	147.9	1847.7	13.2
2.5	193.8	1.3	191.8	12.8	229	58.8
3.3	92.2	1.6	89.7	6.9	106.2	78.5
1	1676.1	1.1	1552.9	156.9	1566.1	18.1
2.3	280.4	1.5	280.8	19	332.2	51.3
1.1	189.1	1.1	194.2	5.9	264.6	26.3
2.2	36.8	2.7	38.4	2.4	215.3	51
0.9	2080.3	1.5	1910	223.7	1955.8	15.6
0.8	1919.7	4.3	1867.7	155.4	1880.7	14
0.8	1718.1	0.8	1773.3	167.1	1837.8	15.4
0.7	2543.1	0.7	2576.1	293.8	2606.9	12.4
1.1	1027.6	3	990.4	66.2	1005.6	22.1

1.1	166.9	0.7	172.4	5	293.7	25
1.1	839.8	1.5	820.8	47	883.1	23
0.8	2648.2	0.8	2507.9	333.7	2529.4	13.4
1.7	201	6.5	204.6	9.2	302	37.9

1.2	833	1.5	877.2	59.8	1118.9	24.5
0.8	1691.2	1.1	1739.9	117.2	1836.6	15.1
1.7	132.3	3.8	134.2	6	219	39
1.1	830	0.9	844.3	52.4	1045	23.3
1.2	992.1	2.7	962.2	67.8	998.6	23.7
1.9	129	1.1	140.7	7.1	424.4	42.9
1.2	832.1	2.2	796.2	50.5	855.4	25
0.6	2432.2	1.5	2469.2	196.4	2488.5	10.8
2	242.3	0.7	236.1	13.2	324.9	45.1
1.6	475.4	0.7	472.8	28.2	602.9	34.4
2.4	279.3	1	271.8	19.2	305.5	54.8
3	105.2	2.8	103.5	7.6	162.1	70.3
0.8	1970.7	0.8	1864.7	209	1920.7	14.9
1.5	227	2.1	225.9	9.3	249.4	33.8

