

SUPPLEMENTARY FILE 5. BK Single grain zircon (U-Th)/He data - Zealandia

Sample No.	Lab. no.	He no.	⁴ He (ncc)	Mass (mg)	U ppm	Th ppm	Th/U	^a [eU] ppm	^b Mean F _T	Age (Ma)	Error ±1σ (Ma)	Grain length (μm)	Grain width (μm)
Chatham Rise													
P67437	8594	25855	16.661	0.0093	118.4	92.7	0.78	140.2	0.80	103.9	6.4	251.0	107.7
P67437	8595	25849	10.741	0.0060	126.5	78.5	0.62	145.0	0.77	101.0	6.3	225.8	89.5
P67437	8596	25846	10.184	0.0074	104.3	62.9	0.60	119.1	0.79	93.8	5.8	233.0	99.8
										^c99.2	7.0		
Chatham Islands													
P80686	8588	25816	19.021	0.0053	204.1	159.6	0.78	241.6	0.77	122.0	7.6	181.5	102.9
P80686	8589	25819	47.473	0.0081	330.7	132.1	0.40	361.8	0.80	132.2	8.2	223.5	110.0
P80686	8668	26084	62.232	0.0085	440.7	181.0	0.41	483.3	0.82	111.5	6.9	212.5	131.6
										^c121.0	26.0		
P80687	8591	25822	126.211	0.0116	732.6	149.6	0.20	767.8	0.82	115.5	7.1	257.7	121.2
P80687	8593	25834	26.790	0.0073	275.3	107.3	0.39	300.5	0.79	99.3	6.1	218.9	105.1
P80687	8669	26081	64.730	0.0048	783.5	437.2	0.56	886.2	0.79	124.0	7.7	236.9	99.2
										^c111.0	32.0		
P40482	8597	25843	107.356	0.0063	871.4	463.6	0.53	980.3	0.78	141.0	8.7	207.5	100.5
P40482	8598	25838	77.821	0.0095	400.4	119.6	0.30	428.5	0.81	154.8	9.6	243.4	112.6
P40482	8599	25836	65.393	0.0063	1202.4	2798.1	2.33	1860.0	0.78	45.5	2.8	198.4	105.9
P40482	8708	26211	91.234	0.0066	513.2	377.0	0.73	601.8	0.79	186.3	11.5	186.3	119.2
P40482	8709	26214	50.450	0.0087	194.2	102.1	0.53	218.2	0.81	212.3	13.1	212.9	124.1
P82333	8608	25868	34.063	0.0045	388.3	220.8	0.57	440.2	0.76	138.7	8.6	192.5	86.8
P82333	8609	25876	20.472	0.0047	221.1	132.1	0.60	252.1	0.77	141.1	8.7	174.7	98.9
P82333	8610	25879	47.984	0.0082	241.1	191.0	0.79	286.0	0.80	166.6	10.3	202.8	125.4
P82316	8603	25806	46.174	0.0109	261.8	138.8	0.53	294.4	0.81	116.9	7.2	264.9	113.5
P82316	8604	25808	61.019	0.0076	390.0	218.0	0.56	441.2	0.80	^d146.9	9.1	219.6	107.9
P82316	8605	25810	5.983	0.0039	107.2	74.9	0.70	124.8	0.75	100.5	6.2	165.2	92.4
										107.5	9.4		
R23285	8228	24165	27.448	0.0039	468.2	408.5	0.87	564.2	0.75	102.9	6.4	156.7	98.9
R23285	8229	24175	32.723	0.0056	377.8	284.4	0.75	444.6	0.77	108.1	6.7	207.5	92.7
R23285	8230	24177	17.542	0.0052	234.8	73.7	0.31	252.1	0.77	109.1	6.8	199.1	92.0
										^c106.6	7.5		
Bounty Islands													
R6182	8611	25901	80.902	0.0111	421.3	170.1	0.40	461.3	0.80	128.6	8.0	317.0	98.6
R6182	8612	25894	215.004	0.0053	2104.0	809.1	0.38	2294.1	0.77	143.4	8.9	205.8	90.2
R6182	8613	25891	57.967	0.0045	297.6	201.5	0.68	345.0	0.76	^d298.1	18.5	191.4	87.0
R6182	8710	26217	139.884	0.0063	996.1	841.1	0.84	1193.8	0.77	151.6	9.4	237.9	88.1
										^c140.0	29.0		
R10721	8226	24161	259.096	0.0082	1729.1	751.7	0.43	1905.8	0.80	134.5	8.3	243.4	102.2
R10721	8227	24163	48.494	0.0049	508.3	292.7	0.58	577.0	0.76	138.6	8.6	206.8	85.6
R10721	8225	24159	46.584	0.0061	297.8	196.2	0.66	343.9	0.76	^d179.6	11.1	251.1	82.7
R10721	8614	25889	56.295	0.0051	686.8	262.0	0.38	748.3	0.77	119.8	7.4	192.8	93.9
R10721	8615	25887	219.589	0.0067	1610.8	520.8	0.32	1733.2	0.78	152.7	9.5	233.1	93.7
R10721	8616	25881	61.455	0.0078	387.2	221.1	0.57	439.2	0.79	145.7	9.0	234.0	102.6
										^c136.0	16.0		
Solander Island													
P79804	8617	25904	29.622	0.0025	609.3	93.7	0.15	631.3	0.70	^d152.1	9.4	174.3	65.1
P79804	8618	25909	15.440	0.0027	381.0	141.7	0.37	414.3	0.72	111.5	6.9	161.1	74.7
P79804	8619	25911	19.829	0.0018	931.8	124.7	0.13	961.1	0.69	92.8	5.7	138.7	65.4
										100.4	8.8		
Campbell Island													
R23627	8600	25796	0.210	0.0017	94.6	63.2	0.67	109.4	0.68	9.1	0.6	106.9	67.2
R23627	8601	25798	0.547	0.0019	243.6	107.1	0.44	268.8	0.70	8.7	0.5	120.9	81.9
R23627	8602	25800	0.790	0.0041	182.9	82.0	0.45	202.2	0.74	7.8	0.5	206.2	76.8
										^c8.5	1.6		
Iselin Bank													
P50869	8606	25860	46.554	0.0035	914.8	474.5	0.52	1026.3	0.72	105.1	6.5	165.5	85.6
P50869	8607	25866	20.636	0.0031	522.9	233.6	0.45	577.8	0.69	94.0	5.8	195.7	67.4
										98.9	8.7		

^aEffective uranium concentration (U ppm + 0.235 Th ppm)

^bF_T is the α-ejection correction after Farley et al. (

^cWeighted mean at the 95% confidence level (calculated using Isoplot by K. Ludwig.)

^dAnalysis excluded from calculation of weighted mean.