

Table S2. SHRIMP-II U–Pb isotopic data on single zircon grains of studied massifs rocks
in the Ozeranya zone, western Mongolia

Analytical point	²⁰⁶ Pb _c , %	U, ppm	Th, ppm	²³² Th/ ²³⁸ U	²⁰⁶ Pb*, ppm	Age according to isotopic ratios ²⁰⁶ Pb*/ ²³⁸ U, Ma		²⁰⁷ Pb*/ ²⁰⁶ Pb* _b	±%	²⁰⁷ Pb*/ ²³⁵ U	±%	²⁰⁶ Pb*/ ²³⁸ U	±%	Rho
Bayan Tsagaan Uul massif														
Diorite-tonalite-plagiogranites association, tonalite-porphyry, sample PM-44/1-07														
4.1	2.09	22	4	0.18	1.64	534	±13	0.0540	21.0	0.640	21.0	0.0864	2.6	0.12
5.1	1.34	42	7	0.17	3.14	535	±9	0.0554	13.0	0.661	13.0	0.0865	1.8	0.14
7.1	0.80	113	44	0.40	8.47	536	±7	0.0562	7.1	0.672	7.3	0.0867	1.4	0.19
13.1	0.00	67	19	0.30	5.04	538	±7	0.0583	4.3	0.699	4.5	0.0870	1.3	0.29
4.2	0.00	100	30	0.32	7.47	539	±6	0.0576	3.6	0.693	3.7	0.0872	1.1	0.29
13.2	1.26	46	12	0.26	3.52	539	±9	0.0532	13.0	0.641	13.0	0.0873	1.8	0.13
10.1	1.27	36	10	0.28	2.72	540	±10	0.0553	13.0	0.667	13.0	0.0874	1.9	0.15
2.1	0.78	79	18	0.24	6.03	544	±8	0.0601	7.9	0.728	8.0	0.0880	1.4	0.18
5.2	0.00	146	38	0.27	11.1	547	±5	0.0591	2.9	0.721	3.1	0.0886	1.0	0.33
12.1	0.47	136	42	0.32	10.5	552	±5	0.0583	5.2	0.718	5.3	0.0894	1.0	0.18
6.1*	0.00	182	53	0.30	14.3	563	±5	0.0578	2.7	0.727	2.8	0.0913	0.9	0.32
1.1*	0.00	104	26	0.26	8.16	564	±5	0.0575	3.4	0.724	3.5	0.0914	1.0	0.28
3.1*	0.00	41	9	0.24	3.21	567	±10	0.0571	5.4	0.723	5.7	0.0919	1.9	0.33
11.1*	1.31	33	8	0.23	2.68	571	11	0.0556	13.0	0.711	13.0	0.0927	2.0	0.15
9.1*	0.00	79	18	0.23	6.36	577	7	0.0580	4.6	0.750	4.8	0.0937	1.2	0.25
Ih-Zamin massif														
Granite-leucogranite association, granite, sample PM-13A-16														
11.1	2.44	1216	615	0.52	82.6	479	±2.3	0.0547	5.8	0.581	5.8	0.07711	0.49	0.08
1.1	0.52	917	315	0.35	61.1	479	±1.8	0.0571	2.2	0.607	2.3	0.07711	0.39	0.17
7.1	0.63	130	71	0.56	8.74	481	±4.5	0.0533	5.7	0.569	5.8	0.07753	0.97	0.17
4.1	1.42	465	274	0.61	31.6	483	±2.5	0.0575	3.8	0.616	3.9	0.07778	0.55	0.14
9.1	0.08	933	252	0.28	62.4	483	±1.7	0.0570	1.2	0.6119	1.3	0.07785	0.37	0.29
8.1	0.50	340	330	1.00	22.8	484	±2.8	0.0571	2.9	0.613	3	0.07788	0.59	0.20
13.1	7.18	405	223	0.57	29.4	485	±3.9	0.0566	9.8	0.608	9.8	0.07805	0.83	0.08
14.1	0.35	253	94	0.38	17	485	±3.1	0.0556	3.1	0.599	3.2	0.07809	0.67	0.21
15.1	0.46	269	167	0.64	18.3	488	±3.1	0.0581	4.7	0.63	4.7	0.07866	0.66	0.14
5.1	0.88	564	158	0.29	38.5	488	±2.3	0.0575	4.2	0.623	4.2	0.07868	0.49	0.12
10.1	1.71	320	225	0.73	22.1	489	±3.1	0.0582	4.9	0.632	4.9	0.07877	0.67	0.14

Note: Pbc and Pb^* are common and radiogenic Pb, respectively. Corrections for common Pb were introduced according to measured ^{204}Pb . * – xenogenic zircon.