

Table S1. Results of U-Pb (CA-ID-TIMS) radioisotopic dating of zircon grains from the sample 19kzb-7, Starokuznetsk Formation, Kolchugino Group, Kuznetsk Basin

Fraction	Dates (Ma)									Composition			Isotopic Ratios						
	²⁰⁶ Pb/ ²³⁸ U	+/-2sigma	²⁰⁷ Pb/ ²³⁵ U	+/-2sigma	²⁰⁷ Pb/ ²⁰⁶ Pb	+/-2sigma	Corr.	% disc	Th/U	Pb* (pg)	Pbc (pg)	Pb*/Pbc	²⁰⁶ Pb/ ²⁰⁴ Pb	²⁰⁶ Pb/ ²³⁸ U	+/-2sigma	²⁰⁷ Pb/ ²³⁵ U	+/-2sigma	²⁰⁷ Pb/ ²⁰⁶ Pb	+/-2sigma
	(a)	abs	(a)	abs	(a)	abs	coef.	(b)	(c)	(d)	(e)	(f)	(g)	(h)	%	(h)	%	(h)	%
19kzb-7																			
19kzb7-1	276,96	0,32	274,06	10,12	249,37	97,00	0,002	-11,06	0,97	41,42	2,72	15,24	851,44	0,043899	0,12	0,309839	4,21	0,051212	4,21
19kzb7-3	324,14	1,53	319,15	55,47	282,88	463,45	0,002	-14,59	0,77	11,97	4,02	2,98	189,69	0,051567	0,48	0,369316	20,25	0,051966	20,26
19kzb7-4	307,23	1,51	308,61	55,83	319,02	476,94	0,003	3,69	0,78	21,28	7,49	2,84	181,23	0,048813	0,50	0,355178	20,98	0,052796	20,98
19kzb7-5	282,38	0,98	285,57	31,50	311,78	288,11	0,004	9,43	1,10	19,57	3,84	5,09	288,69	0,044778	0,35	0,324778	12,66	0,052628	12,66
19kzb7-6	279,03	0,97	279,41	36,88	282,63	345,48	0,003	1,27	1,43	14,45	3,11	4,65	248,15	0,044235	0,36	0,316767	15,10	0,051960	15,10
19kzb7-7	298,37	1,10	304,86	40,68	354,80	348,95	0,004	15,90	0,91	17,57	4,48	3,93	235,94	0,047372	0,38	0,350178	15,45	0,053636	15,45
19kzb7-8	276,74	1,89	254,91	72,22	58,51	763,87	0,005	-373,01	1,66	8,98	3,56	2,52	137,67	0,043865	0,70	0,285367	32,04	0,047204	32,04
19kzb7-9	276,95	0,84	275,83	32,18	266,26	305,76	-0,002	-4,01	1,24	21,88	4,30	5,09	280,49	0,043899	0,31	0,312123	13,32	0,051590	13,33
19kzb7-10	280,08	1,62	265,25	62,97	136,19	633,96	0,002	-105,65	1,05	10,17	4,00	2,54	155,49	0,044405	0,59	0,298524	26,98	0,048780	26,98
19kzb7-11	276,16	1,15	269,12	43,73	208,31	429,02	0,004	-32,57	1,27	15,21	4,02	3,78	212,08	0,043770	0,43	0,303485	18,50	0,050310	18,50
19kzb7-13	276,65	1,25	275,09	47,90	261,85	456,56	0,002	-5,65	1,66	33,72	9,02	3,74	194,57	0,043849	0,46	0,311170	19,88	0,051491	19,88
19kzb7-14	278,46	1,09	277,34	41,48	267,90	392,14	0,002	-3,94	1,32	16,38	4,06	4,04	222,68	0,044142	0,40	0,314078	17,09	0,051627	17,10

(a) Isotopic dates calculated using the decay constants lambda238 = 1.55125E-10 and lambda235 = 9.8485E-10

(b) % discordance = 100 - (100 * (²⁰⁶Pb/²³⁸U date) / (²⁰⁷Pb/²⁰⁶Pb date))

(c) Th contents calculated from radiogenic ²⁰⁸Pb and the ²⁰⁷Pb/²⁰⁶Pb date of the sample and assuming concordance between U-Th and Pb systems.

(d) Total mass of radiogenic Pb.

(e) Total mass of common Pb.

(f) Ratio of radiogenic Pb (including ²⁰⁸Pb) to common Pb.

(g) Measured ratio corrected for fractionation and spike contribution only.

(h) Measured ratios corrected for fractionation and tracer and blank.