Supplement to Augustsson et al. (2011)---LA-ICP-MS zircon U-Pb dating method and data

Method

After sieving, the heavy minerals of the < 250 µm fraction were separated with a sodium polytungstate liquid with a density of ca. 3 g/cm^3. Magnetic heavy minerals were removed with a Frantz magnetic separator (only SRT1). A random selection of the total zircon population was mounted in epoxy and polished to expose the centers of the grains. Zircon regions suitable for analysis were identified from CL and back-scatter electron imaging.

Zircon U-Pb geochronology in Sydney was performed using the method described by Adams et al. (2007). Spot size was 30 µm. Total ablation time was 60 s preceded by 60 s background measurement. Wash-out times were set to 60-120 s. The reference zircons GJ-1, MT-1 (Mud Tank), and 91500 were used as standards (Wiedenbeck et al., 1995; Jackson et al., 2004). The U and Pb isotope data were processed offline using the in-house GLITTER software (Jackson et al., 2004).

In Münster, the method outlined in Kooijman (2009) was used. The spot size was 25-35 µm. Total ablation time was 55 s, which included 20 s with the shutter closed to measure the background. Wash-out times were set to 90 s for AP20, AP27 and Chm3. For all analyzes in AP25, measurements 129.1 to 196.1 in AP20 and 82.1 to 144.1 in AP27, each spot was preablated with three laser shots using a 45 µm beam to remove surface common Pb. For these zircons, wash-out times were reduced to 45 s. External standardisation was done using the GJ-1 reference zircon (Jackson et al., 2004). Measurement of the 91500 standard zircon (Wiedenbeck et al. 1995) as unknown indicated a reproducibility of 2.5 % for $^{206}Pb/^{238}U$ and 3.0 % for $^{207}Pb/^{206}Pb$. The U and Pb isotope data were processed offline using an in-house Excel® spreadsheet (Kooijman, 2009). Common-Pb correction generally was applied to zircons having $^{206}Pb/^{204}Pb < 5{,}000$ using the Pb evolution model of Stacey and Kramers (1975). For zircons older than 1000 Ma, $^{207}Pb/^{206}Pb$ ages were used for age calculation and $^{206}Pb/^{238}U$ ages were used for younger zircons.

Isoplot/Ex 2.49 (Ludwig, 2001) was used for age calculations (assuming $\lambda(^{238}U) = 1.551*10^{-10}a^{-1}$ and $\lambda(^{235}U) = 9.849*10^{-10}a^{-1}$; Jaffey et al. 1971) and statistical treatment of U-Pb data from zircons of all analyzed samples. Probability curves were calculated using AgeDisplay/Ex (Sircombe, 2004).

U-Pb data of the Santa Rosa de Tastil batholith (SRT1)*

	Isotope ratios								Ages (Ma)							
Grain .spot	$^{208}Pb/^{232}Th$	2σ	$^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	$^{208}Pb/^{232}Th$	2σ	$^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ
01.1	0.0253	0.0018	0.0825	0.0018	0.681	0.028	0.0599	0.0026	506	36	511	10	527	16	599	96
02.1	0.0247	0.0015	0.0906	0.0020	0.737	0.026	0.0591	0.0021	*492*	*28*	*559*	*12*	*561*	*14*	*569*	*80*
03.1	0.0239	0.0011	0.0818	0.0017	0.651	0.018	0.0578	0.0017	478	22	507	10	509	10	522	64
04.1	*0.0245*	*0.0015*	*0.0806*	*0.0017*	*0.656*	*0.024*	*0.0590*	*0.0023*	*489*	*30*	*500*	*10*	*512*	*14*	*568*	*86*
05.1	0.0280	0.0037	0.0821	0.0027	0.659	0.046	0.0583	0.0042	559	72	508	16	514	28	540	160
06.1	0.0275	0.0024	0.0877	0.0023	0.709	0.027	0.0586	0.0022	*549*	*48*	*542*	*14*	*544*	*16*	*553*	*82*
07.1	0.0264	0.0035	0.0830	0.0029	0.664	0.050	0.0581	0.0045	526	68	514	18	517	30	532	176
08.1	0.0265	0.0024	0.0875	0.0020	0.706	0.028	0.0585	0.0025	*529*	*48*	*541*	*12*	*542*	*16*	*549*	*94*
09.1	*0.0261*	*0.0027*	*0.0829*	*0.0023*	*0.704*	*0.032*	*0.0616*	*0.0028*	*520*	*52*	*513*	*14*	*541*	*20*	*660*	*100*
10.1	0.0271	0.0016	0.0832	0.0018	0.674	0.020	0.0588	0.0018	540	32	515	10	523	12	558	70
11.1	0.0242	0.0016	0.0830	0.0018	0.673	0.022	0.0589	0.0020	484	32	514	10	523	14	562	76
12.1	0.0502	0.0059	0.1437	0.0035	1.466	0.066	0.0740	0.0035	*990*	*112*	*866*	*20*	*917*	*28*	*1041*	*98*
13.1	0.0271	0.0022	0.0839	0.0021	0.684	0.026	0.0592	0.0022	541	44	519	12	529	16	573	84

*Values in italics were not used for intrusion age calculation

U-Pb data of the Mesón Group

Grain #/~[1] .spot		Round-ness	Grain Shape[2]	Grain length (nm)	Isotope ratios: $^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Ages (Ma): $^{206}Pb/^{204}Pb$[3]	$^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Concordance (%)[5]
AP20 (Lizoite Fm.)																		
01.1	#	sa-sr	elongated	110	0.0743	0.0043	0.589	0.037	0.0575	0.0014	10476	462	26	470	24	511	54	90
02.1	~	sa-sr	round	80	0.0997	0.0057	0.827	0.050	0.0601	0.0012	7655	613	33	612	28	609	42	101
03.1	#	euhedral	oval	120	0.0647	0.0041	0.518	0.037	0.0581	0.0019	3662*	404	25	424	25	533	71	76 (93)
04.1	*mix*				*0.0805*	*0.0046*	*0.614*	*0.039*	*0.0553*	*0.0015*	*677**	*499*	*27*	*486*	*24*	*426*	*60*	*117 (97)*
05.1	#	sa-sr	round	100	0.0760	0.0044	0.601	0.040	0.0574	0.0018	8865	472	26	478	25	507	67	93

Grain .spot	#/~[1]	Round-ness	Grain Shape[2]	Grain length (nm)	Isotope ratios: $^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Ages (Ma): $^{206}Pb/^{204}Pb$[3]	$^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Concordance (%)[5]
06.1					*0.0867*	*0.0058*	*0.778*	*0.055*	*0.0651*	*0.0013*	*3694**	*536*	*35*	*584*	*31*	*778*	*43*	*69*
07.1					*0.0733*	*0.0046*	*0.556*	*0.040*	*0.0550*	*0.0020*	*1355**	*456*	*28*	*449*	*26*	*411*	*80*	*111*
08.1	#	sa-sr	round	50	0.0820	0.0050	0.657	0.047	0.0581	0.0021	10052	508	30	513	29	534	80	95
09.1	~c	sa-sr	elongated	90	0.0766	0.0045	0.603	0.040	0.0571	0.0016	4323*	476	27	479	25	495	63	96
10.1	#	sa-sr	round	70	0.0676	0.0014	0.527	0.016	0.0566	0.0013	5556*	421.8	8.2	430	11	475	50	89 (101)
12.1					*0.0721*	*0.0023*	*0.543*	*0.031*	*0.0546*	*0.0026*	*4966**	*449*	*14*	*440*	*21*	*400*	*110*	*113*
13.1	#	sa-sr	oval	130	0.0679	0.0019	0.528	0.020	0.0564	0.0015	2748*	423	11	430	14	467	59	91
14.1	#	sa-sr	round	90	0.0774	0.0028	0.612	0.027	0.0574	0.0015	2799*	481	17	485	17	505	57	95
15.1	#	sa-sr	elongated	80	0.0725	0.0028	0.573	0.027	0.0573	0.0016	5973*	451	17	460	18	504	63	90
17.1	~	sa-sr	elongated	110	0.0924	0.0034	0.770	0.034	0.0604	0.0015	11132	570	20	580	20	619	53	92
18.1					*0.0682*	*0.0031*	*0.551*	*0.029*	*0.0586*	*0.0014*	*11059*	*425*	*19*	*446*	*19*	*554*	*53*	*77*
19.1					*0.0767*	*0.0026*	*0.581*	*0.036*	*0.0549*	*0.0029*	*828**	*477*	*15*	*465*	*23*	*410*	*120*	*117*
20.1	#	sa-sr	elongated	110	0.0678	0.0022	0.527	0.021	0.0563	0.0014	5242*	423	13	430	14	465	56	91
21.1	#	sa-sr	oval	100	0.0709	0.0023	0.546	0.024	0.0559	0.0016	3904*	442	14	443	16	447	65	99
22.1					*0.0696*	*0.0020*	*0.583*	*0.024*	*0.0608*	*0.0018*	*469**	*433*	*12*	*466*	*15*	*631*	*64*	*69*
23.1	#	sa-sr	elongated	150	0.0857	0.0061	0.711	0.055	0.0602	0.0017	35122	530	36	546	33	610	63	87 (103)
24.1	#	sa-sr	round	120	0.0966	0.0043	0.799	0.044	0.0600	0.0019	n. d.	594	25	596	25	603	70	99
25.1	~	sa-sr	round	80	0.1740	0.0078	1.887	0.096	0.0787	0.0019	16704	1034	43	1077	34	1164	49	89 (97)
26.1	*mix*				*0.0774*	*0.0032*	*0.606*	*0.031*	*0.0567*	*0.0017*	*8584*	*481*	*19*	*481*	*19*	*481*	*65*	*100*
27.1	~	sa-sr	oval	120	0.1750	0.0070	1.745	0.085	0.0723	0.0020	143764	1040	39	1025	31	994	56	105
28.1	#	sa-sr	elongated	160	0.0870	0.0037	0.700	0.036	0.0583	0.0017	2701*	538	22	539	21	543	62	99
29.1	#	euhedral	oval	80	0.0935	0.0038	0.751	0.039	0.0583	0.0019	n. d.	576	22	569	23	540	72	107
30.1	#	sa-sr	oval	80	0.0908	0.0039	0.730	0.042	0.0583	0.0022	6874*	560	23	557	24	542	83	103
31.1	~	sa-sr	oval	80	0.0724	0.0030	0.551	0.031	0.0552	0.0020	4880*	451	18	446	20	419	82	107
32.1	#	sa-sr	elongated	110	0.0899	0.0038	0.736	0.036	0.0593	0.0015	15133	555	22	560	21	580	53	96
34.1	#	sa-sr	elongated	160	0.0821	0.0038	0.656	0.033	0.0580	0.0012	42661	509	22	512	20	528	45	96
35.1	#	sa-sr	round	80	0.0807	0.0035	0.647	0.031	0.0581	0.0012	2994*	501	21	507	19	535	46	94
36.1	#	sa-sr	round	60	0.0752	0.0034	0.569	0.030	0.0549	0.0015	2733*	467	20	458	19	409	61	114 (95)
38.1	#	euhedral	elongated	80	0.0707	0.0032	0.525	0.031	0.0539	0.0020	5021*	440	19	429	20	367	83	120 (93)
39.1	#	sa-sr	elongated	200	0.1221	0.0042	1.062	0.043	0.0631	0.0014	68139	743	24	735	21	710	46	105
40.1					*0.0720*	*0.0032*	*0.540*	*0.036*	*0.0544*	*0.0027*	*3443**	*448*	*19*	*438*	*24*	*390*	*110*	*116*
41.1	#	sa-sr	round	70	0.0695	0.0027	0.524	0.028	0.0547	0.0020	427*	433	17	428	19	400	83	108
42.1					*0.0725*	*0.0022*	*0.612*	*0.037*	*0.0612*	*0.0032*	*1717**	*451*	*13*	*485*	*23*	*650*	*110*	*70*
43.1	#	sa-sr	elongated	180	0.0865	0.0020	0.721	0.039	0.0605	0.0029	732*	535	12	552	23	620	100	86 (106)
44.1	#	sa-sr	round	90	0.1124	0.0030	1.011	0.060	0.0652	0.0035	2238	687	18	709	30	780	110	88 (105)
45.1	#	sa-sr	elongated	140	0.0978	0.0017	0.811	0.041	0.0602	0.0028	5909	601.5	9.8	603	23	610	100	99
46.1	#	sa-sr	round	70	0.0880	0.0022	0.698	0.034	0.0575	0.0024	28247	544	13	537	20	512	91	106
47.1	#	sa-sr	elongated	120	0.0701	0.0019	0.536	0.028	0.0555	0.0024	3714*	437	12	436	18	431	98	101
48.1	#	sa-sr	round	70	0.0770	0.0031	0.590	0.040	0.0556	0.0030	5385*	478	18	471	25	440	120	110
49.1	#	euhedral	oval	90	0.0932	0.0022	0.747	0.039	0.0581	0.0027	4759*	575	13	566	23	530	100	108
50.1	#	sa-sr	elongated	150	0.1013	0.0027	0.846	0.044	0.0606	0.0027	7663*	622	16	622	24	624	96	100
51.1					*0.0740*	*0.0024*	*0.589*	*0.032*	*0.0577*	*0.0025*	*5115**	*460*	*15*	*470*	*20*	*518*	*94*	*89*
52.1	#	sa-sr	round	90	0.0812	0.0040	0.635	0.042	0.0568	0.0025	3293*	503	24	499	26	482	97	104
53.1	#	sa-sr	round	80	0.1793	0.0051	1.885	0.061	0.0763	0.0012	168619	1063	28	1076	21	1102	31	96
54.1	#	sa-sr	round	100	0.0738	0.0026	0.583	0.026	0.0573	0.0017	3536*	459	15	466	17	502	64	91
55.1	#	sa-sr	oval	60	0.0822	0.0038	0.670	0.036	0.0591	0.0016	215569	509	23	521	22	569	58	90
56.1	~	sa-sr	round	70	0.1037	0.0061	0.867	0.061	0.0607	0.0023	4419*	636	36	634	33	628	83	101
57.1	#	sa-sr	elongated	170	0.0837	0.0042	0.680	0.038	0.0589	0.0015	17740	518	25	527	23	563	54	92
58.1	#	euhedral	round	150	0.0766	0.0039	0.607	0.036	0.0575	0.0017	5898*	476	23	481	23	509	65	93
59.1	#	sa-sr	round	90	0.0813	0.0038	0.646	0.036	0.0576	0.0018	4643*	504	23	506	22	515	68	98
60.1	#	sa-sr	elongated	180	0.0940	0.0062	0.765	0.054	0.0590	0.0013	2314*	579	37	577	31	568	48	102
61.1	#	sa-sr	round	70	0.0829	0.0055	0.660	0.048	0.0578	0.0018	3339*	513	33	515	30	522	68	98
62.1	#	sa-sr	round	70	0.0971	0.0066	0.760	0.055	0.0568	0.0013	2790*	598	39	574	32	483	52	124 (104)
63.1	#	sa-sr	round	80	0.0613	0.0051	0.471	0.041	0.0557	0.0016	1305*	383	31	392	29	442	63	87 (109)
64.1	#	sa-sr	round	120	0.3472	0.0233	5.507	0.421	0.1150	0.0042	23778	1920	110	1902	66	1880	66	102
66.1	#	sa-sr	round	90	0.0765	0.0056	0.591	0.056	0.0560	0.0034	39504*	475	33	472	36	450	140	105
67.1	#	sa-sr	round	90	0.0925	0.0061	0.712	0.054	0.0558	0.0020	8074*	570	36	546	32	446	80	128 (101)
70.1	#	sa-sr	elongated	130	0.0693	0.0056	0.530	0.051	0.0555	0.0029	1046*	432	34	432	34	430	120	100
72.1					*0.0720*	*0.0051*	*0.570*	*0.047*	*0.0575*	*0.0024*	*514**	*448*	*31*	*458*	*31*	*510*	*94*	*88*
73.1	~	sa-sr	oval	80	0.0826	0.0064	0.657	0.063	0.0577	0.0032	268641	512	38	513	38	520	120	99
74.1	#	sa-sr	oval	100	0.0882	0.0061	0.713	0.057	0.0586	0.0024	11070	545	36	547	34	554	89	98
75.1	#	euhedral	elongated	140	0.0753	0.0055	0.595	0.052	0.0573	0.0028	6314*	468	33	474	33	500	110	93
76.1	~	euhedral	round	70	0.0767	0.0058	0.611	0.056	0.0578	0.0029	3293	476	35	484	35	520	110	91
77.1	#	euhedral	oval	90	0.0883	0.0046	0.721	0.045	0.0592	0.0021	19342	545	27	551	27	575	77	95
78.1	#	sa-sr	elongated	150	0.0854	0.0042	0.703	0.039	0.0597	0.0015	3860	528	25	541	23	595	54	89 (102)
79.1	#	sa-sr	round	70	0.0829	0.0043	0.662	0.040	0.0580	0.0019	9756	513	25	516	25	529	70	97

Grain .spot	#/~[1]	Round-ness	Grain Shape[2]	Grain length (nm)	Isotope ratios: $^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Ages (Ma): $^{206}Pb/^{204}Pb$[3]	$^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Concordance (%)[5]
80.1					*0.0703*	*0.0037*	*0.556*	*0.038*	*0.0574*	*0.0026*	*469**	*438*	*22*	*449*	*25*	*508*	*98*	*86*
82.1	#	sa-sr	oval	80	0.0826	0.0043	0.667	0.040	0.0586	0.0016	6144	512	26	519	24	551	60	93
83.1	#	sa-sr	oval	70	0.0902	0.0065	0.732	0.055	0.0589	0.0015	21211	557	38	558	32	563	54	99
85.1					*0.0803*	*0.0056*	*0.719*	*0.053*	*0.0650*	*0.0016*	*2184*	*498*	*34*	*550*	*32*	*773*	*53*	*64*
86.1	#	euhedral	oval	80	0.0919	0.0067	0.744	0.059	0.0587	0.0018	538*	567	40	565	34	556	69	102
87.1					*0.0692*	*0.0053*	*0.515*	*0.043*	*0.0540*	*0.0020*	*719**	*431*	*32*	*422*	*29*	*371*	*82*	*116*
88.1	#	sa-sr	oval	110	0.0838	0.0030	0.673	0.033	0.0582	0.0020	92352*	519	18	522	20	538	75	96
89.1	#	sa-sr	oval	80	0.0971	0.0029	0.789	0.033	0.0590	0.0017	21984	597	17	591	18	566	62	106
90.1	#	sa-sr	elongated	140	0.0833	0.0026	0.682	0.027	0.0594	0.0014	22235	515	15	528	16	582	53	89 (100)
91.1	#	sa-sr	elongated	120	0.0915	0.0027	0.737	0.028	0.0584	0.0015	164892	565	16	560	17	543	54	104
92.1	*mix*				*0.1036*	*0.0028*	*0.866*	*0.032*	*0.0606*	*0.0016*	*1466**	*636*	*16*	*633*	*17*	*625*	*56*	*102*
93.1	#	sa-sr	elongated	90	0.1849	0.0064	1.902	0.087	0.0746	0.0022	n. d.	1093	35	1082	30	1058	60	103
94.1	#	sa-sr	elongated	130	0.0921	0.0024	0.747	0.024	0.0589	0.0011	21948	568	14	567	14	562	40	101
95.1	#	sa-sr	round	80	0.0825	0.0030	0.672	0.028	0.0591	0.0012	104589	511	18	522	17	570	45	90
96.1					*0.0654*	*0.0032*	*0.527*	*0.030*	*0.0585*	*0.0016*	*6391**	*408*	*19*	*430*	*20*	*547*	*61*	*75*
97.1	#	sa-sr	round	70	0.0960	0.0033	0.775	0.030	0.0585	0.0011	24653	591	19	582	17	550	40	107
98.1	#	sa-sr	oval	140	0.0648	0.0021	0.511	0.021	0.0572	0.0014	970*	405	13	419	14	498	52	81 (94)
99.1	#	euhedral	round	110	0.1839	0.0059	1.918	0.068	0.0756	0.0011	29186	1088	32	1087	23	1086	29	100
100.1	#	sa-sr	round	130	0.0894	0.0032	0.718	0.029	0.0582	0.0011	54197	552	19	550	17	539	40	102
101.1	#	sa-sr	round	130	0.0857	0.0027	0.685	0.025	0.0580	0.0010	17610	530	16	530	15	530	37	100
102.1	#	sa-sr	elongated	130	0.0854	0.0029	0.679	0.026	0.0577	0.0011	13549	528	17	526	16	518	40	102
103.1					*0.0810*	*0.0035*	*0.681*	*0.033*	*0.0609*	*0.0014*	*8614**	*502*	*21*	*527*	*20*	*637*	*49*	*79*
104.1	#	sa-sr	oval	130	0.0838	0.0030	0.655	0.027	0.0567	0.0012	n. d.	519	18	512	17	480	45	108
105.1	#	sa-sr	elongated	160	0.0754	0.0029	0.589	0.025	0.0567	0.0011	616*	469	17	470	16	479	44	98
106.1	#	sa-sr	round	90	0.0847	0.0050	0.690	0.043	0.0591	0.0013	4768	524	30	533	26	571	48	92
107.1	#	sa-sr	round	90	0.0949	0.0055	0.760	0.047	0.0581	0.0012	11492	584	32	574	27	534	44	109
108.1	#	sa-sr	oval	100	0.0835	0.0048	0.669	0.041	0.0581	0.0012	78952	517	29	520	25	534	43	97
109.1	#	sa-sr	oval	80	0.0804	0.0046	0.659	0.041	0.0594	0.0013	35668	499	28	514	25	582	49	86 (99)
110.1	~	sa-sr	round	80	0.1006	0.0085	0.841	0.082	0.0607	0.0030	1724*	618	50	620	46	630	110	98
111.1	#	sa-sr	oval	110	0.0916	0.0070	0.755	0.063	0.0598	0.0020	8168	565	41	571	37	598	74	95
112.1	#	sa-sr	elongated	160	0.0778	0.0062	0.619	0.054	0.0577	0.0020	1606*	483	37	489	34	518	77	93
113.1	#	rounded	round	120	0.1100	0.0085	0.905	0.076	0.0596	0.0020	3010*	673	49	654	40	590	72	114 (94)
114.1					*0.1035*	*0.0081*	*0.838*	*0.076*	*0.0587*	*0.0028*	*793**	*635*	*47*	*618*	*42*	*560*	*100*	*114*
115.1					*0.0378*	*0.0041*	*0.324*	*0.038*	*0.0622*	*0.0028*	*263**	*239*	*25*	*285*	*29*	*683*	*95*	*35*
116.1	#	euhedral	oval	180	0.0912	0.0084	0.732	0.073	0.0582	0.0023	7329	563	49	557	43	536	85	105
117.1					*0.0353*	*0.0034*	*0.321*	*0.035*	*0.0659*	*0.0030*	*168**	*224*	*21*	*282*	*27*	*804*	*97*	*28*
118.1	#	sa-sr	elongated	140	0.0898	0.0084	0.726	0.074	0.0586	0.0023	1197755	554	50	554	43	554	86	100
119.1	#	sa-sr	round	74	0.0813	0.0059	0.635	0.053	0.0567	0.0022	4385*	504	35	499	33	478	87	105
120.1	#	sa-sr	elongated	100	0.0868	0.0061	0.702	0.054	0.0587	0.0018	n. d.	537	36	540	32	554	66	97
122.1					*0.0886*	*0.0063*	*0.691*	*0.058*	*0.0566*	*0.0025*	*8052*	*547*	*37*	*533*	*35*	*475*	*97*	*115*
123.1					*0.0646*	*0.0047*	*0.551*	*0.047*	*0.0618*	*0.0027*	*1087**	*403*	*28*	*445*	*31*	*669*	*93*	*60*
124.1	#	sa-sr	oval	90	0.0884	0.0069	0.743	0.063	0.0610	0.0021	4074	546	41	564	37	639	74	86 (104)
125.1	#	sa-sr	elongated	130	0.0857	0.0035	0.660	0.036	0.0559	0.0020	2431*	530	21	515	22	448	80	118 (97)
126.1	#	sa-sr	round	100	0.0931	0.0034	0.756	0.041	0.0588	0.0024	437*	574	20	571	24	561	87	102
127.1	#	sa-sr	round	100	0.0929	0.0030	0.748	0.034	0.0584	0.0018	13572	573	18	567	20	545	69	105
128.1	~	sa-sr	elongated	130	0.2038	0.0074	2.055	0.095	0.0731	0.0021	99493	1195	39	1134	32	1018	59	117 (107)
129.1	#	euhedral	oval	120	0.0753	0.0029	0.611	0.026	0.0588	0.0012	619*	468	17	484	17	561	45	83 (94)
130.1	#	euhedral	elongated	120	0.0900	0.0027	0.743	0.028	0.0599	0.0013	4187	555	16	564	16	600	49	93
131.1	#	sa-sr	elongated	170	0.1796	0.0062	1.854	0.070	0.0749	0.0011	9481	1065	34	1065	25	1065	30	100
132.1	#	sa-sr	round	90	0.0876	0.0025	0.707	0.026	0.0585	0.0013	33526	542	15	543	15	550	48	98
133.1	#	euhedral	round	90	0.0883	0.0016	0.725	0.020	0.0595	0.0013	6126	545.4	9.4	554	12	587	47	93
134.1	#	euhedral	elongated	190	0.0703	0.0013	0.551	0.018	0.0568	0.0016	779*	438.1	7.6	445	12	483	60	91
135.1	#	sa-sr	oval	100	0.1801	0.0030	1.803	0.045	0.0726	0.0013	n. d.	1068	16	1046	16	1003	37	106
136.1	#	sa-sr	elongated	160	0.0836	0.0014	0.682	0.021	0.0591	0.0015	5339	517.4	8.5	528	13	573	56	90
137.1	#	euhedral	elongated	140	0.0842	0.0014	0.686	0.017	0.0591	0.0011	n. d.	521.1	8.5	531	11	572	41	91
139.1	#	sa-sr	oval	120	0.3545	0.0053	5.535	0.144	0.1132	0.0024	n. d.	1956	25	1906	22	1852	39	106
140.1	#	sa-sr	elongated	140	0.1133	0.0016	1.011	0.029	0.0647	0.0016	2485	692.1	9.3	709	15	765	52	91

Grain .spot	#/~[1]	Round-ness	Grain Shape[2]	Grain length (nm)	Isotope ratios: $^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Ages (Ma): $^{206}Pb/^{204}Pb$[3]	$^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Concordance (%)[5]
141.1	#	euhedral	elongated	100	0.0757	0.0029	0.595	0.041	0.0570	0.0032	1267*	470	17	474	26	490	130	95
142.1	#	sa-sr	elongated	140	0.0813	0.0018	0.652	0.041	0.0582	0.0034	248	504	11	510	25	540	130	94
145.1	#	euhedral	oval	90	0.1716	0.0027	1.754	0.049	0.0741	0.0017	23219	1021	15	1028	18	1045	46	98
148.1	#	euhedral	elongated	220	0.1894	0.0037	1.942	0.062	0.0744	0.0019	18887	1118	20	1096	21	1051	51	106
149.1	*mix*				*0.0925*	*0.0023*	*0.759*	*0.032*	*0.0595*	*0.0020*	*5465*	*570*	*14*	*573*	*18*	*586*	*72*	*97*
150.1	#	euhedral	elongated	110	0.0927	0.0018	0.749	0.025	0.0586	0.0016	33817	571	11	568	14	553	58	103
151.1	#	euhedral	oval	70	0.1086	0.0023	0.929	0.045	0.0620	0.0027	3921	665	13	667	24	675	94	98
153.1	#	euhedral	elongated	130	0.0918	0.0023	0.757	0.030	0.0598	0.0019	51167	566	13	572	18	596	69	95
154.1	#	euhedral	elongated	160	0.0864	0.0017	0.711	0.020	0.0597	0.0013	5795	534.0	9.8	545	12	592	46	90
155.1	~	sa-sr	oval	70	0.0873	0.0020	0.720	0.021	0.0599	0.0011	6676	539	12	551	13	599	41	90
157.1	#	euhedral	elongated	160	0.0936	0.0018	0.772	0.020	0.0599	0.0011	n. d.	577	11	581	12	598	39	96
158.1	#	sa-sr	oval	120	0.1638	0.0028	1.622	0.040	0.0718	0.0013	n. d.	978	15	979	15	981	36	100
159.1	#	euhedral	elongated	110	0.0885	0.0020	0.712	0.020	0.0584	0.0010	n. d.	547	12	546	12	545	37	100
160.1	~	sa-sr	elongated	180	0.1179	0.0018	1.034	0.020	0.0636	0.0008	n. d.	718	10	721	10	730	26	98
162.1					*0.0738*	*0.0016*	*0.602*	*0.016*	*0.0591*	*0.0010*	*1732**	*459.1*	*9.4*	*478*	*10*	*572*	*37*	*80*
163.1	#	sa-sr	round	100	0.1723	0.0022	1.765	0.030	0.0743	0.0008	n. d.	1025	12	1033	11	1050	23	98
164.1	#	euhedral	elongated	190	0.0889	0.0011	0.746	0.015	0.0609	0.0009	3871	548.8	6.5	565.8	8.5	635	33	86 (92)
166.1	~	sa-sr	round	90	0.0894	0.0016	0.732	0.022	0.0594	0.0014	4152	552.1	9.4	558	13	582	53	95
167.1	#	sa-sr	round	120	0.0772	0.0015	0.612	0.017	0.0575	0.0011	1019*	479.4	9.1	485	10	512	41	94
168.1					*0.0952*	*0.0019*	*0.832*	*0.025*	*0.0634*	*0.0014*	*4138*	*586*	*11*	*615*	*14*	*721*	*48*	*81*
169.1	#	sa-sr	oval	100	0.0711	0.0012	0.558	0.019	0.0570	0.0017	n. d.	442.8	7.0	451	12	491	65	90
170.1	*mix*				*0.0804*	*0.0015*	*0.646*	*0.015*	*0.0583*	*0.0008*	n. d.	*498.2*	*8.8*	*506.0*	*9.0*	*541*	*29*	*92*
172.1	~	sa-sr	round	90	0.0855	0.0017	0.689	0.021	0.0584	0.0013	6398	529	10	532	12	546	49	97
173.1					*0.0840*	*0.0020*	*0.722*	*0.027*	*0.0623*	*0.0018*	*2733*	*520*	*12*	*552*	*16*	*685*	*62*	*76*
175.1	#	sa-sr	elongated	100	0.0791	0.0014	0.626	0.022	0.0574	0.0017	12936	490.6	8.6	494	14	508	66	97
176.1					*0.2847*	*0.0055*	*4.827*	*0.127*	*0.1230*	*0.0022*	*3420*	*1615*	*28*	*1790*	*22*	*2000*	*31*	*81*
177.1	~	sa-sr	oval	130	0.0854	0.0017	0.687	0.021	0.0583	0.0014	6697	528.5	9.9	531	13	541	51	98
178.1	*mix*				*0.0777*	*0.0014*	*0.610*	*0.024*	*0.0570*	*0.0021*	*820**	*482.4*	*8.1*	*484*	*15*	*491*	*80*	*98*
179.1	#	sa-sr	elongated	150	0.1017	0.0025	0.854	0.029	0.0609	0.0015	n. d.	624	14	627	16	635	51	98
180.1	#	sa-sr	round	70	0.0775	0.0034	0.652	0.042	0.0610	0.0029	2833	481	20	510	26	640	100	75 (93)
182.1					*0.0798*	*0.0018*	*0.668*	*0.021*	*0.0607*	*0.0014*	*6817*	*495*	*11*	*520*	*13*	*629*	*49*	*79*
183.1	*mix*				*0.0644*	*0.0017*	*0.500*	*0.022*	*0.0564*	*0.0020*	*259**	*402*	*10*	*412*	*15*	*467*	*78*	*86 (106)*
184.1					*0.0826*	*0.0028*	*0.706*	*0.032*	*0.0620*	*0.0018*	*5430*	*512*	*16*	*542*	*19*	*674*	*64*	*76*
186.1					*0.0651*	*0.0023*	*0.536*	*0.024*	*0.0597*	*0.0016*	*628**	*407*	*14*	*436*	*16*	*592*	*60*	*69*
190.1	#	sa-sr	round	90	0.0823	0.0020	0.668	0.020	0.0589	0.0011	711*	510	12	520	12	564	39	90
191.1					*0.0481*	*0.0013*	*0.362*	*0.025*	*0.0547*	*0.0035*	*107**	*302.6*	*7.9*	*314*	*19*	*400*	*140*	*76*
192.1	~	sa-sr	oval	50	0.0904	0.0020	0.735	0.021	0.0590	0.0011	7550	558	12	559	12	566	39	98
194.1	#	euhedral	elongated	130	0.0892	0.0024	0.734	0.025	0.0597	0.0012	44886	551	14	559	14	592	43	93
195.1					*0.0557*	*0.0011*	*0.456*	*0.021*	*0.0594*	*0.0025*	*233**	*349.1*	*6.9*	*381*	*15*	*581*	*92*	*60*
196.1	#	sa-sr	oval	130	0.0919	0.0023	0.756	0.027	0.0597	0.0015	8209	566	13	572	15	593	55	96
AP25 (Campanario Fm.)																		
02.1	#	sa-sr	oval	50	0.1117	0.0037	0.965	0.039	0.0627	0.0014	7611	682	22	686	20	697	49	98
03.1	#	sa-sr	elongated	80	0.1161	0.0032	1.040	0.040	0.0649	0.0018	1382*	708	18	724	20	772	58	92
06.1	#	sa-sr	elongated	70	0.1141	0.0061	0.986	0.072	0.0627	0.0031	3337*	696	35	696	37	700	110	100
07.1	#	sa-sr	round	60	0.0908	0.0025	0.741	0.025	0.0592	0.0012	16222	560	15	563	15	574	46	98
08.1	#	sa-sr	oval	60	0.0997	0.0031	0.851	0.038	0.0619	0.0020	2922	613	18	625	21	670	69	91
09.1					*0.0154*	*0.0009*	*0.144*	*0.010*	*0.0679*	*0.0021*	*439**	*98.7*	*6.0*	*137.0*	*8.8*	*866*	*66*	*11*
11.1	#	sa-sr	oval	80	0.1784	0.0057	1.876	0.074	0.0763	0.0018	13388	1058	31	1073	26	1102	46	96
12.1					*0.0715*	*0.0039*	*0.605*	*0.040*	*0.0613*	*0.0023*	*9757*	*445*	*24*	*480*	*25*	*651*	*80*	*68*
13.1	#	sa-sr	elongated	60	0.0653	0.0021	0.498	0.020	0.0554	0.0012	4270*	408	13	410	13	427	50	95
15.1	#	rounded	round	80	0.0849	0.0030	0.685	0.027	0.0585	0.0011	n. d.	525	18	529	16	549	43	96
20.1	#	sa-sr	elongated	90	0.0957	0.0024	0.797	0.025	0.0604	0.0011	11559	589	14	595	14	618	40	95
21.1					*0.0430*	*0.0019*	*0.495*	*0.081*	*0.0835*	*0.0132*	*96**	*271*	*12*	*408*	*55*	*1280*	*310*	*21*
22.1	~	sa-sr	elongated	60	0.0833	0.0023	0.702	0.031	0.0612	0.0021	n. d.	515	14	540	19	646	75	80 (93)
23.1	#	sa-sr	round	80	0.0626	0.0031	0.477	0.026	0.0553	0.0014	4066*	391	19	396	18	424	56	92
24.1	#	sa-sr	oval	80	0.0862	0.0029	0.701	0.057	0.0590	0.0044	767*	533	17	539	34	570	160	94
26.1	#	sa-sr	oval	90	0.0966	0.0025	0.810	0.024	0.0608	0.0009	2143*	595	15	602	14	631	33	94

Grain .spot	#/~[1]	Round-ness	Grain Shape[2]	Grain length (nm)	Isotope ratios: $^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Ages (Ma): $^{206}Pb/^{204}Pb$[3]	$^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Concordance (%)[5]
27.1	#	rounded	round	80	0.1035	0.0019	0.898	0.030	0.0629	0.0018	7551	635	11	651	16	705	59	90
28.1	#	rounded	round	80	0.1079	0.0030	0.915	0.029	0.0615	0.0009	n. d.	661	17	660	15	657	32	101
29.1					*0.0584*	*0.0020*	*0.491*	*0.021*	*0.0609*	*0.0016*	*430**	*366*	*12*	*405*	*14*	*636*	*55*	*58*
32.1					*0.0505*	*0.0036*	*0.377*	*0.034*	*0.0541*	*0.0030*	*644**	*318*	*22*	*324*	*25*	*370*	*130*	*85*
33.1					*0.0651*	*0.0022*	*0.532*	*0.021*	*0.0593*	*0.0012*	*6864*	*407*	*13*	*433*	*14*	*577*	*43*	*71*
34.1	#	sa-sr	oval	100	0.0956	0.0026	0.802	0.027	0.0609	0.0012	n. d.	588	15	598	15	635	41	93
35.1					*0.0732*	*0.0029*	*0.625*	*0.032*	*0.0619*	*0.0020*	*2219*	*455*	*17*	*493*	*20*	*672*	*68*	*68*
36.1	#	sa-sr	oval	60	0.0895	0.0044	0.732	0.113	0.0593	0.0087	n. d.*	553	26	558	67	580	320	95
37.1					*0.0615*	*0.0017*	*0.521*	*0.024*	*0.0615*	*0.0023*	*n. d.*	*385*	*10*	*426*	*16*	*655*	*80*	*59*
38.1					*0.0671*	*0.0021*	*0.551*	*0.022*	*0.0596*	*0.0016*	*5111*	*419*	*12*	*446*	*15*	*588*	*57*	*71*
39.1					*0.0137*	*0.0005*	*0.130*	*0.008*	*0.0691*	*0.0032*	*157**	*87.4*	*3.3*	*124.1*	*7.0*	*901*	*95*	*10*
50.1					*0.0479*	*0.0023*	*0.363*	*0.039*	*0.0549*	*0.0053*	*504**	*302*	*14*	*314*	*29*	*410*	*220*	*74*
51.1	#	sa-sr	round	70	0.1056	0.0043	0.914	0.046	0.0628	0.0018	2811	647	25	659	24	700	62	92
52.1	#	sa-sr	elongated	120	0.1238	0.0059	1.101	0.108	0.0645	0.0055	1512	752	34	754	52	760	180	99
54.1					*0.0574*	*0.0018*	*0.491*	*0.020*	*0.0620*	*0.0017*	*7324*	*360*	*11*	*405*	*14*	*673*	*60*	*53*
56.1	#	rounded	elongated	180	0.0834	0.0029	0.680	0.040	0.0591	0.0028	12481	516	18	527	24	570	100	90
59.1					*0.0705*	*0.0032*	*0.594*	*0.030*	*0.0611*	*0.0014*	*4451*	*439*	*19*	*474*	*19*	*643*	*50*	*68*
60.1	*mix*				*0.0940*	*0.0020*	*0.791*	*0.030*	*0.0610*	*0.0019*	*3210*	*579*	*12*	*592*	*17*	*640*	*67*	*90*
61.1	~	rounded	oval	110	0.2855	0.0067	4.234	0.115	0.1076	0.0015	11815	1619	34	1681	22	1759	25	92
62.1	~	rounded	round	80	0.3188	0.0056	5.337	0.118	0.1214	0.0016	n. d.	1784	27	1875	19	1977	24	90
63.1	#	sa-sr	elongated	100	0.0922	0.0047	0.763	0.043	0.0600	0.0015	2038*	569	28	576	25	604	53	94
68.1	#	sa-sr	oval	80	0.1203	0.0032	1.081	0.047	0.0652	0.0022	2789	732	18	744	23	781	72	94
69.1	#	sa-sr	elongated	140	0.0842	0.0029	0.678	0.046	0.0583	0.0034	747*	521	17	525	28	543	129	96
70.1	~	sa-sr	oval	90	0.1108	0.0027	0.978	0.042	0.0640	0.0022	4956	677	16	693	21	742	73	91
71.1	~	sa-sr	oval	70	0.1020	0.0037	0.870	0.038	0.0618	0.0015	1882*	626	21	635	21	668	53	94
72.1					*0.0553*	*0.0035*	*0.451*	*0.069*	*0.0592*	*0.0083*	*1264**	*347*	*21*	*378*	*48*	*570*	*310*	*61*
73.1	#	sa-sr	elongated	70	0.0842	0.0030	0.673	0.032	0.0580	0.0019	1761*	521	18	523	20	530	71	98
75.1					*0.1547*	*0.0084*	*2.362*	*0.148*	*0.1107*	*0.0034*	*2095**	*927*	*47*	*1231*	*45*	*1812*	*55*	*51*
76.1	*mix*				*0.0824*	*0.0028*	*0.692*	*0.029*	*0.0609*	*0.0016*	*2158*	*510*	*17*	*534*	*18*	*637*	*55*	*80*
77.1					*0.0694*	*0.0036*	*0.575*	*0.037*	*0.0601*	*0.0022*	*n. d.*	*433*	*22*	*462*	*24*	*607*	*81*	*71*
78.1	#	sa-sr	round	60	0.0815	0.0033	0.677	0.037	0.0603	0.0022	2196*	505	20	525	22	615	80	82 (98)
79.1	#	sa-sr	round	80	0.1097	0.0032	0.936	0.049	0.0618	0.0027	1429*	671	18	671	26	669	93	100
80.1	#	rounded	elongated	150	0.0792	0.0024	0.623	0.032	0.0571	0.0024	13503	491	14	492	20	495	94	99
81.1	#	euhedral	round	80	0.0875	0.0025	0.705	0.029	0.0585	0.0017	813401	541	15	542	17	549	63	99
82.1	*mix*				*0.0919*	*0.0040*	*0.748*	*0.040*	*0.0590*	*0.0019*	*1161**	*567*	*24*	*567*	*23*	*568*	*69*	*100*
84.1	#	sa-sr	oval	120	0.0803	0.0031	0.634	0.029	0.0573	0.0014	2185*	498	19	498	18	501	52	99
85.1					*0.0339*	*0.0020*	*0.273*	*0.018*	*0.0585*	*0.0016*	*958**	*215*	*12*	*245*	*14*	*550*	*60*	*39*
86.1	#	sa-sr	round	70	0.0969	0.0045	0.811	0.047	0.0607	0.0021	5492	596	26	603	26	628	75	95
87.1	#	sa-sr	elongated	100	0.0923	0.0037	0.754	0.040	0.0592	0.0021	551*	569	22	570	23	574	77	99
89.1	~	sa-sr	round	80	0.0585	0.0040	0.433	0.041	0.0537	0.0036	724*	366	24	365	29	360	150	102
90.1	~	rounded	oval	140	0.0986	0.0038	0.823	0.035	0.0606	0.0011	50047	606	23	610	20	624	40	97
92.1					*0.0369*	*0.0013*	*0.332*	*0.023*	*0.0654*	*0.0038*	*99**	*233.4*	*8.3*	*291*	*17*	*790*	*120*	*30*
93.1	#	sa-sr	elongated	120	0.0976	0.0038	0.817	0.041	0.0607	0.0019	8559	600	23	606	23	629	66	95
94.1	#	sa-sr	oval	70	0.0832	0.0024	0.671	0.022	0.0585	0.0009	n. d.	515	14	522	13	550	35	94
95.1	#c	sa-sr	oval	80	0.0626	0.0015	0.478	0.023	0.0554	0.0023	1376*	391.3	9.2	397	16	430	95	91
96.1					*0.0456*	*0.0018*	*0.362*	*0.017*	*0.0575*	*0.0014*	*377**	*288*	*11*	*313*	*13*	*511*	*54*	*56*
97.1	#	rounded	oval	100	0.3545	0.0086	6.189	0.215	0.1266	0.0032	58166	1956	41	2003	30	2052	44	95
98.1	#	sa-sr	round	90	0.0923	0.0043	0.772	0.039	0.0607	0.0011	n. d.	569	25	581	22	628	40	91
99.1	#	euhedral	elongated	140	0.0759	0.0022	0.594	0.027	0.0568	0.0020	9924	472	13	474	17	484	76	97
100.1	#	sa-sr	round	90	0.0765	0.0028	0.609	0.029	0.0577	0.0018	n. d.	475	17	483	18	519	67	92
101.1	~	sa-sr	elongated	90	0.1669	0.0061	1.735	0.070	0.0754	0.0012	16556	995	34	1022	26	1079	32	92
102.1					*0.2054*	*0.0110*	*3.003*	*0.202*	*0.1060*	*0.0043*	*4257*	*1204*	*59*	*1408*	*51*	*1732*	*74*	*70*
103.1	#	sa-sr	oval	90	0.0957	0.0015	0.810	0.029	0.0613	0.0020	3099	589.3	8.9	602	16	651	69	91
106.1					*0.0518*	*0.0022*	*0.425*	*0.029*	*0.0595*	*0.0031*	*592**	*325*	*14*	*360*	*20*	*590*	*110*	*56*
107.1	#	sa-sr	oval	80	0.1119	0.0030	0.967	0.033	0.0627	0.0014	3271	683	17	687	17	698	47	98
108.1	#	euhedral	oval	90	0.2833	0.0062	4.222	0.114	0.1081	0.0017	16294	1608	31	1678	22	1767	29	91
109.1	#	sa-sr	oval	80	0.1005	0.0037	0.863	0.039	0.0623	0.0017	10251	618	22	632	21	683	58	90

Grain .spot	#/~[1]	Round-ness	Grain Shape[2]	Grain length (nm)	Isotope ratios: $^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Ages (Ma): $^{206}Pb/^{204}Pb$[3]	$^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Concordance (%)[5]
110.1	#	sa-sr	elongated	70	0.0876	0.0027	0.736	0.040	0.0609	0.0027	1160*	541	16	560	23	637	95	85 (103)
111.1	#	rounded	elongated	120	0.0934	0.0031	0.765	0.039	0.0595	0.0023	n. d.	575	18	577	22	584	83	99
112.1	#	sa-sr	oval	50	0.3580	0.0110	6.384	0.313	0.1293	0.0049	5025	1973	52	2030	43	2089	67	94
113.1	#	rounded	elongated	120	0.0701	0.0030	0.560	0.031	0.0579	0.0020	1945*	437	18	452	20	528	76	83 (101)
114.1	*mix*				*0.0712*	*0.0033*	*0.558*	*0.029*	*0.0568*	*0.0012*	*n. d.*	*444*	*20*	*450*	*19*	*484*	*48*	*92*
115.1	#	euhedral	elongated	120	0.0831	0.0035	0.673	0.033	0.0587	0.0014	13761	515	21	523	20	558	53	92
116.1	~	sa-sr	round	50	0.3640	0.0149	6.583	0.305	0.1312	0.0028	52257	2001	71	2057	41	2114	38	95
117.1	#	rounded	round	90	0.0886	0.0024	0.709	0.028	0.0581	0.0017	10090	547	14	544	17	533	65	103
118.1	*mix*				*0.0581*	*0.0016*	*0.449*	*0.016*	*0.0560*	*0.0014*	*1343**	*364.1*	*9.4*	*376*	*11*	*452*	*55*	*80 (94)*
119.1	#	sa-sr	oval	110	0.3572	0.0077	6.878	0.179	0.1396	0.0020	4455	1969	37	2096	23	2223	25	89 (91)
120.1					*0.0221*	*0.0009*	*0.176*	*0.009*	*0.0578*	*0.0020*	*256**	*140.9*	*5.4*	*164.6*	*8.0*	*521*	*77*	*27*
121.1					*0.0620*	*0.0055*	*0.480*	*0.057*	*0.0562*	*0.0045*	*948**	*388*	*33*	*398*	*39*	*460*	*180*	*85*
124.1	#	sa-sr	elongated	130	0.0950	0.0023	0.792	0.032	0.0604	0.0020	3617	585	14	592	18	620	70	94
125.1					*0.0262*	*0.0007*	*0.209*	*0.022*	*0.0580*	*0.0059*	*138**	*166.6*	*4.6*	*193*	*19*	*530*	*230*	*31*
126.1					*0.0148*	*0.0019*	*0.114*	*0.045*	*0.0557*	*0.0211*	*267**	*95*	*12*	*110*	*41*	*440*	*560*	*21*
127.1	#	euhedral	elongated	100	0.0865	0.0027	0.691	0.044	0.0579	0.0032	1423*	535	16	533	27	530	120	102
128.1					*0.0655*	*0.0017*	*0.531*	*0.023*	*0.0588*	*0.0020*	*629**	*409*	*10*	*433*	*15*	*560*	*76*	*73*
129.1	~	rounded	oval	60	0.0523	0.0041	0.384	0.054	0.0532	0.0062	805*	329	25	330	39	340	270	98
130.1	#	euhedral	oval	90	0.0713	0.0021	0.553	0.029	0.0563	0.0025	1725*	444	12	447	19	464	97	96
132.1	#	sa-sr	elongated	150	0.1133	0.0021	0.964	0.053	0.0617	0.0032	n. d.*	692	12	685	27	660	110	104
134.1	#	sa-sr	elongated	110	0.0857	0.0022	0.690	0.030	0.0584	0.0020	1476*	530	13	533	18	544	75	98
135.1	#	sa-sr	elongated	700	0.0721	0.0017	0.549	0.031	0.0553	0.0028	813*	449	10	445	20	420	120	106
136.1	#	euhedral	elongated	190	0.0939	0.0014	0.766	0.018	0.0592	0.0010	9968	578.3	8.5	577	10	574	38	101
138.1	#	rounded	elongated	170	0.1114	0.0029	0.952	0.082	0.0620	0.0051	285*	681	17	679	43	670	180	101
139.1	~	sa-sr	elongated	110	0.0521	0.0029	0.379	0.050	0.0527	0.0063	607*	328	18	326	37	320	270	103
140.1	~	sa-sr	elongated	100	0.1792	0.0057	1.849	0.079	0.0748	0.0022	7990	1063	31	1063	28	1064	58	100
141.1	~	sa-sr	round	80	0.0753	0.0011	0.589	0.024	0.0568	0.0021	502*	467.7	6.9	470	15	483	82	97
142.1	#	sa-sr	round	80	0.0832	0.0016	0.670	0.018	0.0585	0.0011	n. d.	514.9	9.5	521	11	548	42	94
143.1	#	sa-sr	round	70	0.0861	0.0022	0.693	0.022	0.0584	0.0011	1282*	532	13	535	13	546	41	98
144.1	#	sa-sr	elongated	90	0.0944	0.0042	0.768	0.040	0.0590	0.0016	6397	582	25	579	23	567	60	103
145.1	#	sa-sr	elongated	120	0.0965	0.0026	0.785	0.037	0.0590	0.0022	1201*	594	15	588	21	566	83	105
146.1	#	sa-sr	round	70	0.0834	0.0018	0.656	0.020	0.0570	0.0012	810*	516	11	512	12	492	45	105
147.1	#	rounded	oval	80	0.1082	0.0025	0.922	0.026	0.0618	0.0009	21634	662	15	663	13	668	32	99
148.1	#	sa-sr	elongated	70	0.0944	0.0046	0.789	0.053	0.0606	0.0028	2967*	582	27	590	30	625	100	93
150.1	#	sa-sr	round	60	0.1036	0.0029	0.871	0.055	0.0610	0.0035	52676	635	17	636	30	640	120	99
151.1	#	sa-sr	elongated	80	0.3282	0.0107	5.119	0.187	0.1131	0.0019	17489	1829	52	1839	31	1850	30	99
152.1					*0.0865*	*0.0039*	*0.768*	*0.058*	*0.0644*	*0.0039*	*n. d.*	*535*	*23*	*579*	*33*	*760*	*130*	*71*
153.1	~	rounded	elongated	120	0.0825	0.0020	0.657	0.025	0.0577	0.0017	11190	511	12	513	15	519	65	98
154.1	#	sa-sr	round	60	0.1369	0.0039	1.300	0.241	0.0689	0.0126	243*	827	22	850	110	890	390	92
155.1					*0.0677*	*0.0021*	*0.545*	*0.022*	*0.0584*	*0.0014*	*n. d.*	*422*	*13*	*442*	*14*	*543*	*54*	*78*
156.1	*mix*				*0.1027*	*0.0026*	*0.864*	*0.030*	*0.0610*	*0.0015*	*n. d.*	*630*	*15*	*632*	*16*	*641*	*52*	*98*
157.1	#	sa-sr	elongated	140	0.1053	0.0022	0.897	0.021	0.0618	0.0007	16021	645	13	650	11	666	26	97
158.1	#	sa-sr	oval	90	0.1619	0.0035	1.649	0.045	0.0739	0.0012	10072	967	19	989	17	1039	34	93
160.1	#	sa-sr	oval	100	0.0639	0.0018	0.490	0.055	0.0556	0.0061	167*	399	11	405	38	440	240	91
163.1					*0.0659*	*0.0023*	*0.560*	*0.024*	*0.0617*	*0.0014*	*8486*	*411*	*14*	*452*	*15*	*663*	*50*	*62*
164.1	#	sa-sr	round	70	0.2969	0.0093	4.459	0.159	0.1089	0.0019	17094	1676	46	1723	30	1781	31	94
165.1	#	sa-sr	oval	70	0.0962	0.0035	0.804	0.042	0.0606	0.0022	179632	592	21	599	24	625	80	95
166.1	#	euhedral	oval	70	0.1094	0.0044	0.935	0.042	0.0620	0.0013	13406	669	25	670	22	673	44	99
167.1	#	sa-sr	elongated	100	0.1003	0.0047	0.847	0.043	0.0613	0.0013	n. d.	616	27	623	24	650	45	95
168.1	#	rounded	elongated	90	0.1630	0.0051	1.659	0.073	0.0738	0.0023	4185	974	28	993	28	1036	63	94
169.1	*mix*				*0.1647*	*0.0046*	*1.709*	*0.068*	*0.0753*	*0.0021*	*789**	*983*	*25*	*1012*	*26*	*1076*	*57*	*91*
170.1					*0.0640*	*0.0022*	*0.543*	*0.023*	*0.0616*	*0.0014*	*865**	*400*	*14*	*441*	*15*	*661*	*49*	*60*
171.1	~	rounded	round	60	0.1246	0.0044	1.093	0.048	0.0636	0.0016	17570	757	25	750	23	728	55	104
172.1	#	rounded	oval	60	0.0775	0.0035	0.604	0.031	0.0565	0.0013	2537*	481	21	480	19	472	50	102
173.1	#	euhedral	round	70	0.0724	0.0039	0.550	0.078	0.0551	0.0072	313*	450	24	445	51	410	290	109
174.1	#	sa-sr	round	70	0.0824	0.0031	0.659	0.035	0.0580	0.0021	n. d.	511	19	514	21	530	81	96
278.1	#	sa-sr	round	60	0.0756	0.0025	0.587	0.036	0.0563	0.0029	2217*	470	15	469	23	460	110	102

Grain .spot	#/~[1]	Round-ness	Grain Shape[2]	Grain length (nm)	Isotope ratios: $^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Ages (Ma): $^{206}Pb/^{204}Pb$[3]	$^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Concordance (%)[5]
279.1	#	sa-sr	elongated	110	0.0829	0.0025	0.674	0.028	0.0590	0.0017	853*	514	15	523	17	566	62	91
281.1	#	sa-sr	elongated	70	0.0485	0.0031	0.353	0.027	0.0527	0.0023	3846*	305	19	307	21	320	100	96
282.1	~	sa-sr	round	90	0.1062	0.0024	0.901	0.035	0.0616	0.0020	16607	650	14	652	19	659	68	99
283.1	#c	rounded	oval	100	0.0716	0.0030	0.552	0.083	0.0559	0.0081	521*	446	18	447	54	450	320	99
AP27 (Chalhualmayoc Fm.)																		
01.1					*0.0813*	*0.0032*	*0.721*	*0.049*	*0.0643*	*0.0036*	*3384*	*504*	*19*	*551*	*29*	*750*	*120*	*67*
04.1	#	rounded	round	90	0.0776	0.0032	0.619	0.035	0.0579	0.0022	797*	482	19	489	22	525	84	92
05.1	#	rounded	elongated	130	0.0857	0.0028	0.676	0.024	0.0572	0.0009	2028*	530	17	524	15	499	33	106
06.1	#c	sa-sr	oval	110	0.1295	0.0043	1.175	0.044	0.0658	0.0011	3402*	785	25	789	20	800	36	98
08.1	#	sa-sr	round	80	0.0974	0.0033	0.828	0.031	0.0616	0.0009	38057	599	19	612	17	660	32	91
09.1					*0.0948*	*0.0032*	*0.827*	*0.030*	*0.0632*	*0.0009*	*556**	*584*	*19*	*612*	*17*	*716*	*30*	*82*
10.1					*0.2260*	*0.0108*	*3.753*	*0.188*	*0.1204*	*0.0018*	*3290**	*1314*	*57*	*1583*	*40*	*1963*	*27*	*67*
11.1	~	rounded	round	80	0.3568	0.0131	5.902	0.226	0.1200	0.0013	3509*	1967	62	1961	33	1956	19	101
12.1					*0.0698*	*0.0027*	*0.593*	*0.029*	*0.0616*	*0.0018*	*580**	*435*	*16*	*473*	*18*	*659*	*63*	*66*
13.1					*0.0862*	*0.0034*	*0.738*	*0.033*	*0.0621*	*0.0013*	*1324**	*533*	*20*	*561*	*19*	*677*	*44*	*79*
14.1	#	sa-sr	elongated	120	0.0842	0.0025	0.699	0.024	0.0603	0.0010	3771*	521	15	538	14	613	35	85 (93)
15.1	#	sa-sr	round	100	0.0764	0.0025	0.614	0.033	0.0583	0.0025	404*	475	15	486	21	541	94	88 (109)
16.1	#c	sa-sr	oval	150	0.0956	0.0030	0.773	0.036	0.0587	0.0020	2084*	589	18	582	20	555	74	106
17.1	#	rounded	elongated	180	0.0979	0.0029	0.824	0.027	0.0610	0.0009	15248	602	17	610	15	640	31	94
18.1	#	sa-sr	elongated	110	0.0963	0.0029	0.778	0.026	0.0586	0.0008	2032*	593	17	584	15	552	30	107
19.1					*0.0915*	*0.0018*	*0.807*	*0.022*	*0.0639*	*0.0012*	*737**	*565*	*11*	*601*	*12*	*739*	*41*	*76*
20.1	~	sa-sr	round	110	0.3802	0.0085	6.432	0.163	0.1227	0.0015	n. d.	2077	40	2037	22	1996	22	104
22.1	#	sa-sr	elongated	120	0.1002	0.0031	0.842	0.030	0.0610	0.0010	54997	615	18	620	16	638	37	96
23.1	#	sa-sr	round	90	0.0861	0.0034	0.724	0.030	0.0610	0.0008	1332*	532	20	553	18	638	27	83 (90)
24.1	#	sa-sr	oval	150	0.0943	0.0036	0.782	0.035	0.0601	0.0013	1107*	581	21	587	20	609	48	95
26.1	#	sa-sr	round	120	0.0774	0.0034	0.630	0.031	0.0590	0.0015	11593	481	20	496	20	566	55	85 (98)
27.1					*0.0678*	*0.0028*	*0.656*	*0.031*	*0.0702*	*0.0015*	*1464*	*423*	*17*	*512*	*19*	*933*	*44*	*45*
29.1					*0.1046*	*0.0048*	*0.945*	*0.046*	*0.0655*	*0.0010*	*2477**	*641*	*28*	*675*	*24*	*791*	*33*	*81*
34.1	#	sa-sr	oval	80	0.0905	0.0031	0.738	0.030	0.0592	0.0014	25333	559	18	562	18	573	50	98
35.1	#	rounded	elongated	120	0.1243	0.0032	1.118	0.032	0.0652	0.0008	12397	755	18	762	15	782	27	97
36.1	#	sa-sr	oval	110	0.0782	0.0020	0.610	0.019	0.0565	0.0010	1169*	485	12	483	12	473	39	103
37.1	#	rounded	elongated	110	0.3208	0.0162	5.128	0.275	0.1159	0.0021	4612	1794	79	1841	46	1895	33	95
38.1	#	sa-sr	elongated	90	0.0872	0.0044	0.709	0.039	0.0589	0.0013	3054*	539	26	544	23	565	49	95
40.1	#	sa-sr	oval	90	0.0708	0.0041	0.550	0.046	0.0564	0.0035	5818*	441	24	445	30	470	140	94
41.1	#	sa-sr	round	70	0.0900	0.0038	0.755	0.041	0.0608	0.0021	2491	556	22	571	24	633	76	88 (104)
42.1	#	sa-sr	elongated	160	0.0875	0.0034	0.706	0.035	0.0585	0.0019	2401	541	20	542	21	549	69	99
43.1	~	rounded	round	70	0.3622	0.0186	6.232	0.354	0.1248	0.0030	12380	1993	88	2009	50	2026	42	98
44.1					*0.0668*	*0.0035*	*0.550*	*0.032*	*0.0597*	*0.0015*	*718*	*417*	*21*	*445*	*21*	*594*	*54*	*70*
47.1	#	sa-sr	elongated	170	0.1085	0.0095	0.931	0.093	0.0622	0.0029	12242	664	56	668	49	682	99	97
48.1					*0.0864*	*0.0040*	*0.759*	*0.040*	*0.0638*	*0.0015*	*4882*	*534*	*24*	*574*	*23*	*734*	*51*	*73*
49.1	#	sa-sr	elongated	120	0.0948	0.0048	0.791	0.049	0.0605	0.0021	5101	584	28	592	28	623	74	94
50.1	#	rounded	round	120	0.2965	0.0142	4.329	0.326	0.1059	0.0061	5566	1674	71	1699	62	1730	110	97
51.1	#	sa-sr	elongated	140	0.2789	0.0111	4.135	0.235	0.1075	0.0044	18613	1586	56	1661	47	1758	74	90
52.1	#	sa-sr	elongated	140	0.0789	0.0032	0.629	0.038	0.0579	0.0026	5914	490	19	496	23	525	97	93
53.1					*0.0722*	*0.0031*	*0.538*	*0.036*	*0.0540*	*0.0027*	*1340*	*450*	*19*	*437*	*23*	*370*	*110*	*121*
54.1	#	sa-sr	round	80	0.1008	0.0037	0.858	0.048	0.0617	0.0026	7477	619	22	629	26	665	90	93
55.1	#	sa-sr	oval	130	0.0874	0.0030	0.723	0.037	0.0600	0.0023	n. d.*	540	18	553	22	603	82	90
56.1					*0.1161*	*0.0048*	*1.236*	*0.070*	*0.0772*	*0.0029*	*1563*	*708*	*28*	*817*	*32*	*1127*	*76*	*63*
57.1	#	sa-sr	round	100	0.0762	0.0031	0.598	0.034	0.0569	0.0022	8675	473	19	476	22	488	87	97
58.1	#	sa-sr	elongated	120	0.1183	0.0039	1.050	0.051	0.0644	0.0023	n. d.*	721	22	729	25	755	76	95
60.1	#	rounded	round	170	0.0862	0.0044	0.692	0.037	0.0582	0.0010	5205	533	26	534	22	538	38	99
61.1	#	sa-sr	round	70	0.0790	0.0050	0.616	0.042	0.0565	0.0014	1833	490	30	487	26	474	54	103
62.1	#	rounded	elongated	130	0.3016	0.0156	4.872	0.258	0.1172	0.0014	13303	1699	77	1797	45	1913	21	89 (94)
63.1	#	sa-sr	elongated	150	0.1051	0.0054	0.926	0.053	0.0639	0.0016	4399	644	32	665	28	739	54	87 (99)
64.1	#	sa-sr	elongated	150	0.0905	0.0043	0.773	0.040	0.0619	0.0012	10745	558	25	581	23	672	43	83 (93)
66.1	#	sa-sr	oval	120	0.3525	0.0162	6.692	0.331	0.1377	0.0025	78900	1946	77	2072	44	2198	32	89 (93)
67.1	~	sa-sr	round	100	0.0885	0.0041	0.739	0.038	0.0606	0.0013	715	546	24	562	22	624	45	88 (99)

Grain .spot	#/~[1]	Round-ness	Grain Shape[2]	Grain length (nm)	Isotope ratios: $^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Ages (Ma): $^{206}Pb/^{204}Pb$[3]	$^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Concordance (%)[5]
68.1	#	sa-sr	oval	100	0.1007	0.0034	0.834	0.034	0.0601	0.0013	6111	619	20	616	19	606	49	102
69.1	#	rounded	round	100	0.0897	0.0039	0.771	0.039	0.0623	0.0016	5260	554	23	580	22	685	54	81 (91)
70.1					*0.3428*	*0.0067*	*6.997*	*0.184*	*0.1480*	*0.0026*	*15799*	*1900*	*32*	*2111*	*23*	*2323*	*30*	*82*
71.1	#	sa-sr	oval	120	0.0977	0.0019	0.809	0.021	0.0601	0.0010	887	601	11	602	12	607	36	99
73.1	#	sa-sr	round	90	0.1063	0.0020	0.928	0.023	0.0633	0.0011	1060	651	12	666	12	719	36	91
74.1	#	rounded	round	140	0.1032	0.0014	0.867	0.018	0.0610	0.0010	n. d.*	632.9	7.9	634	10	639	36	99
76.1	#	sa-sr	elongated	120	0.0979	0.0020	0.817	0.023	0.0605	0.0012	902	602	12	606	13	623	43	97
77.1	#	sa-sr	elongated	130	0.0810	0.0025	0.639	0.031	0.0573	0.0021	1026	502	15	502	19	503	83	100
78.1	#	sa-sr	oval	170	0.3520	0.0155	6.253	0.295	0.1288	0.0022	24862	1944	74	2012	41	2082	30	93
79.1	~c	sa-sr	oval	110	0.0995	0.0037	0.831	0.037	0.0606	0.0015	788	611	22	614	21	625	53	98
82.1	#	sa-sr	oval	150	0.3967	0.0091	7.135	0.285	0.1305	0.0043	471899	2154	42	2128	36	2104	58	102
83.1	#	sa-sr	round	70	0.1081	0.0028	0.917	0.045	0.0615	0.0025	n. d.	662	17	661	24	658	89	101
84.1	~	rounded	elongated	90	0.3346	0.0063	5.234	0.199	0.1134	0.0038	n. d.	1860	30	1858	32	1855	60	100
85.1	#	sa-sr	elongated	150	0.5355	0.0189	14.348	0.706	0.1943	0.0066	11399	2764	79	2773	47	2779	56	99
87.1	~	sa-sr	round	90	0.1132	0.0017	0.971	0.034	0.0622	0.0019	23556	691.3	9.9	689	17	682	67	101
88.1	#	sa-sr	oval	140	0.1116	0.0018	0.946	0.036	0.0615	0.0021	6363	682	11	676	19	658	74	104
89.1	#	rounded	oval	110	0.4028	0.0055	7.558	0.247	0.1361	0.0040	n. d.	2182	25	2180	29	2178	52	100
91.1	#	rounded	elongated	190	0.3897	0.0058	6.985	0.232	0.1300	0.0039	48961	2121	27	2110	29	2098	52	101
95.1	#	rounded	round	120	0.4043	0.0128	7.589	0.254	0.1361	0.0015	n. d.	2189	59	2184	30	2179	19	100
97.1	#	sa-sr	round	60	0.0984	0.0029	0.826	0.034	0.0609	0.0017	1843*	605	17	611	19	636	61	95
98.1	~	sa-sr	elongated	160	0.1060	0.0030	0.960	0.045	0.0657	0.0024	n. d.	650	17	683	23	796	78	82 (93)
99.1	~c	rounded	elongated	120	0.4083	0.0129	7.695	0.267	0.1367	0.0020	21747	2207	59	2196	31	2186	25	101
100.1	#	sa-sr	round	140	0.6118	0.0184	20.282	0.741	0.2404	0.0050	47820	3077	74	3105	35	3123	33	99
101.1					*0.1231*	*0.0030*	*1.903*	*0.063*	*0.1121*	*0.0025*	*502**	*749*	*17*	*1082*	*22*	*1833*	*40*	*41*
102.1					*0.0976*	*0.0028*	*0.864*	*0.034*	*0.0642*	*0.0018*	*1916**	*600*	*16*	*632*	*19*	*749*	*58*	*80*
103.1	*mix*				*0.1075*	*0.0029*	*0.944*	*0.034*	*0.0637*	*0.0015*	*5222*	*658*	*17*	*675*	*18*	*730*	*50*	*90*
104.1	#	sa-sr	elongated	180	0.1022	0.0029	0.870	0.034	0.0617	0.0017	n. d.	627	17	636	19	665	58	94
105.1	#	sa-sr	round	90	0.0678	0.0043	0.549	0.051	0.0588	0.0040	1196*	423	26	444	33	560	150	76 (110)
106.1	#	sa-sr	round	90	0.1062	0.0032	0.897	0.035	0.0613	0.0015	n. d.	651	18	650	19	649	54	100
107.1	#	rounded	oval	160	0.1197	0.0035	1.055	0.042	0.0639	0.0017	11550	729	20	731	21	740	56	98
108.1	#	rounded	round	110	0.3771	0.0125	6.609	0.264	0.1271	0.0029	n. d.	2063	58	2061	35	2058	40	100
110.1	#	sa-sr	round	100	0.0885	0.0027	0.727	0.026	0.0596	0.0011	1773*	547	16	555	15	588	38	93
111.1	#	euhedral	oval	130	0.0926	0.0029	0.755	0.028	0.0591	0.0011	5552	571	17	571	16	572	42	100
112.1	~	sa-sr	elongated	120	0.1653	0.0076	1.695	0.100	0.0743	0.0027	n. d.	986	42	1007	38	1051	73	94
113.1	#	rounded	oval	130	0.3748	0.0131	6.573	0.259	0.1272	0.0023	161001	2052	61	2056	35	2060	32	100
114.1	#	sa-sr	elongated	180	0.1046	0.0035	0.891	0.034	0.0618	0.0011	103470	641	20	647	18	667	40	96
115.1	#	rounded	elongated	130	0.0994	0.0033	0.827	0.031	0.0604	0.0010	7744	611	19	612	17	618	37	99
118.1	#	sa-sr	elongated	150	0.0972	0.0026	0.801	0.025	0.0598	0.0009	n. d.	598	15	598	14	597	33	100
120.1	#	sa-sr	elongated	150	0.1086	0.0029	0.931	0.031	0.0622	0.0012	n. d.	664	17	668	16	681	40	98
121.1	#	sa-sr	elongated	140	0.1376	0.0035	1.294	0.046	0.0682	0.0017	1277*	831	20	843	20	876	51	95
122.1	#	sa-sr	oval	110	0.1050	0.0034	0.936	0.038	0.0646	0.0016	7838	644	20	671	20	763	51	84 (93)
124.1	~	sa-sr	elongated	140	0.0975	0.0023	0.824	0.024	0.0613	0.0010	n. d.	600	13	610	13	650	37	92
125.1	#	rounded	elongated	240	0.0979	0.0027	0.811	0.024	0.0600	0.0007	n. d.	602	16	603	13	605	26	100
126.1	#	rounded	round	60	0.1585	0.0045	1.567	0.052	0.0717	0.0012	9682	948	25	957	21	977	35	97
127.1	#	rounded	round	90	0.1038	0.0028	0.875	0.030	0.0612	0.0012	6814	637	17	639	16	645	43	99
128.1					*0.0691*	*0.0025*	*0.593*	*0.030*	*0.0622*	*0.0023*	*626**	*431*	*15*	*472*	*19*	*680*	*78*	*63*
129.1	#	sa-sr	oval	130	0.1075	0.0034	0.914	0.038	0.0617	0.0017	11039	658	20	659	20	663	59	99
131.1	~	sa-sr	elongated	120	0.1031	0.0022	0.891	0.028	0.0627	0.0015	5119	633	13	647	15	698	50	91
132.1					*0.0848*	*0.0028*	*1.091*	*0.050*	*0.0934*	*0.0030*	*420**	*524*	*17*	*749*	*24*	*1495*	*61*	*35*
133.1					*0.1424*	*0.0066*	*1.651*	*0.106*	*0.0841*	*0.0037*	*755**	*858*	*37*	*990*	*40*	*1295*	*85*	*66*
135.1	#	euhedral	elongated	160	0.1241	0.0032	1.113	0.044	0.0650	0.0019	4137	754	18	759	21	776	62	97
136.1	#	rounded	elongated	110	0.1009	0.0031	0.847	0.036	0.0609	0.0018	989*	620	18	623	20	636	65	97
137.1	#	sa-sr	round	90	0.2101	0.0058	2.390	0.080	0.0825	0.0015	99193	1229	31	1239	24	1258	36	98
138.1	#	sa-sr	oval	120	0.1199	0.0036	1.066	0.060	0.0644	0.0031	6760	730	21	737	30	760	100	97
139.1	~	sa-sr	oval	110	0.3258	0.0081	5.428	0.159	0.1208	0.0019	25899	1818	39	1889	25	1969	28	92
140.1	~	rounded	elongated	160	0.0973	0.0041	0.821	0.040	0.0612	0.0015	n. d.	599	24	609	22	647	53	93
141.1	~	sa-sr	round	120	0.1236	0.0063	1.136	0.063	0.0667	0.0014	3624	751	36	771	30	827	44	91

Grain .spot	#/~[1]	Round-ness	Grain Shape[2]	Grain length (nm)	Isotope ratios: $^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Ages (Ma): $^{206}Pb/^{204}Pb$[3]	$^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Concordance (%)[5]
142.1	#	sa-sr	round	90	0.2806	0.0153	3.884	0.228	0.1004	0.0022	21521	1595	77	1610	47	1631	40	98
144.1	~	sa-sr	round	80	0.3348	0.0143	5.385	0.241	0.1167	0.0015	4901	1861	69	1883	38	1906	24	98
Chm3 (Chalhualmayoc Fm.)																		
01.1	~	rounded	elongated	160	0.4732	0.0157	10.601	0.403	0.1625	0.0030	30807	2498	69	2489	35	2482	32	101
02.1	#	sa-sr	oval	70	0.1203	0.0050	1.108	0.049	0.0668	0.0011	5722	733	29	757	24	830	33	88 (95)
03.1	*mix*				*0.0993*	*0.0051*	*0.852*	*0.049*	*0.0622*	*0.0015*	*7712*	*610*	*30*	*626*	*27*	*681*	*53*	*90*
04.1	#	sa-sr	oval	100	0.1097	0.0037	0.934	0.034	0.0618	0.0009	1955*	671	22	670	18	667	30	101
05.1	#	rounded	round	130	0.1053	0.0042	0.911	0.039	0.0628	0.0009	783	645	24	658	21	701	32	92
06.1	#	sa-sr	elongated	130	0.1028	0.0039	0.868	0.036	0.0612	0.0010	n. d.	631	23	635	19	647	34	98
07.1	~	sa-sr	round	120	0.1109	0.0046	0.969	0.047	0.0634	0.0016	7002	678	27	688	24	722	53	94
08.1	#c	rounded	round	110	0.4866	0.0231	13.055	0.669	0.1946	0.0037	n. d.	2560	100	2684	48	2781	31	92
09.1	#	sa-sr	elongated	120	0.3452	0.0144	6.014	0.264	0.1264	0.0017	29834	1912	69	1978	38	2048	24	93
10.1					*0.1209*	*0.0087*	*1.224*	*0.096*	*0.0734*	*0.0023*	*3137*	*736*	*50*	*812*	*44*	*1026*	*65*	*72*
11.1	#	sa-sr	elongated	120	0.1171	0.0079	1.000	0.073	0.0619	0.0018	1919*	714	45	704	37	671	61	106
12.1	#	rounded	round	110	0.3787	0.0242	6.613	0.440	0.1266	0.0023	43224	2070	110	2061	59	2052	33	101
13.1	#	rounded	round	80	0.1181	0.0074	1.043	0.068	0.0640	0.0011	18122	720	43	725	34	743	36	97
14.1	#	sa-sr	elongated	110	0.0985	0.0066	0.803	0.059	0.0592	0.0018	5841*	605	39	599	33	573	66	106
15.1	~	sa-sr	round	90	0.1084	0.0065	0.921	0.066	0.0616	0.0024	645*	664	38	663	35	661	83	100
16.1	~	rounded	elongated	130	0.1116	0.0062	0.959	0.058	0.0623	0.0016	n. d.	682	36	683	30	686	54	99
17.1	#	rounded	elongated	120	0.1006	0.0053	0.850	0.047	0.0613	0.0010	37040	618	31	625	26	649	35	95
18.1	~	rounded	oval	90	0.0929	0.0065	0.745	0.058	0.0582	0.0021	2264*	573	38	566	34	537	79	107
19.1	#	sa-sr	oval	110	0.0916	0.0052	0.747	0.044	0.0591	0.0010	19318	565	31	566	26	572	35	99
20.1	#	rounded	oval	120	0.0918	0.0034	0.731	0.029	0.0578	0.0009	n. d.	566	20	557	17	520	34	109
21.1	~	rounded	oval	110	0.1516	0.0063	1.478	0.070	0.0707	0.0016	13893	910	35	921	29	948	47	96
22.1	~	sa-sr	oval	150	0.1105	0.0042	0.946	0.040	0.0621	0.0011	115397	676	25	676	21	678	40	100
23.1	#	sa-sr	oval	100	0.0942	0.0046	0.788	0.048	0.0607	0.0022	2396*	580	27	590	27	628	79	92
24.1	~	sa-sr	oval	110	0.3326	0.0142	5.508	0.246	0.1201	0.0016	17204	1851	69	1902	38	1958	23	95
25.1	~	sa-sr	elongated	130	0.3854	0.0161	7.017	0.321	0.1320	0.0024	21893	2101	75	2114	41	2125	32	99
26.1	#	sa-sr	elongated	160	0.1299	0.0052	1.165	0.060	0.0650	0.0020	7556	787	30	784	28	775	66	102
27.1	#	sa-sr	round	100	0.1015	0.0051	0.873	0.048	0.0624	0.0014	29054	623	30	637	26	686	49	91
28.1	#	rounded	elongated	150	0.0984	0.0052	0.834	0.047	0.0615	0.0013	n. d.	605	30	616	26	656	44	92
29.1	#	sa-sr	elongated	180	0.0922	0.0031	0.748	0.029	0.0588	0.0011	2104*	569	18	567	17	560	42	101
30.1	#	sa-sr	elongated	160	0.1145	0.0021	0.982	0.035	0.0622	0.0019	1090*	699	12	695	18	682	64	102
31.1	#	sa-sr	elongated	210	0.1225	0.0029	1.068	0.033	0.0633	0.0012	3976	745	17	738	16	717	41	104
32.1					*0.1593*	*0.0039*	*1.831*	*0.050*	*0.0833*	*0.0011*	*4883*	*953*	*21*	*1057*	*18*	*1277*	*25*	*75*
33.1	~	rounded	elongated	150	0.0912	0.0023	0.769	0.024	0.0612	0.0012	22317	563	14	579	14	646	41	87 (95)
34.1	#	sa-sr	elongated	140	0.1076	0.0020	0.895	0.026	0.0603	0.0013	39227	659	11	649	14	614	47	107
35.1	#	rounded	oval	130	0.0997	0.0026	0.845	0.031	0.0615	0.0016	3983	613	15	622	17	656	56	93
36.1	~c	rounded	oval	100	0.1062	0.0022	0.912	0.026	0.0623	0.0012	11966	651	13	658	14	684	42	95
37.1	~	sa-sr	oval	80	0.1200	0.0061	1.067	0.078	0.0644	0.0034	1236*	731	35	737	39	760	110	97
38.1	#	sa-sr	elongated	190	0.1061	0.0016	0.920	0.022	0.0629	0.0012	n. d.	649.9	9.4	663	12	706	39	92
39.1	#	rounded	elongated	140	0.1630	0.0081	1.627	0.087	0.0724	0.0014	40483	973	45	981	34	998	41	98
40.1					*0.1885*	*0.0090*	*2.375*	*0.121*	*0.0914*	*0.0016*	*3462*	*1113*	*49*	*1235*	*36*	*1455*	*34*	*76*
41.1	*mix*				*0.3491*	*0.0180*	*5.649*	*0.306*	*0.1173*	*0.0020*	*19333*	*1930*	*86*	*1924*	*47*	*1916*	*30*	*101*
42.1	~	rounded	elongated	174	0.1562	0.0083	1.533	0.101	0.0712	0.0028	3706	936	46	944	41	963	80	97
53.1	#	rounded	oval	100	0.1000	0.0033	0.841	0.036	0.0610	0.0017	10058	614	20	620	20	641	58	96
54.1	#	sa-sr	elongated	140	0.0940	0.0027	0.780	0.028	0.0602	0.0012	11002	579	16	586	16	611	44	95
55.1	#	euhedral	oval	110	0.1000	0.0055	0.825	0.052	0.0598	0.0019	13343	615	32	611	29	598	68	103
56.1	#	rounded	oval	80	0.2875	0.0084	4.264	0.148	0.1076	0.0020	n. d.	1629	42	1686	28	1759	34	93
57.1	#	euhedral	round	60	0.0881	0.0028	0.722	0.027	0.0595	0.0012	9992	544	17	552	16	584	44	93
58.1	~	rounded	oval	120	0.0989	0.0031	0.823	0.031	0.0603	0.0013	36498	608	18	610	18	615	46	99
59.1	#	rounded	elongated	190	0.0852	0.0035	0.682	0.040	0.0581	0.0023	439*	527	21	528	24	532	89	99
60.1	#	sa-sr	elongated	100	0.0949	0.0032	0.763	0.032	0.0583	0.0014	1725*	585	19	576	18	541	52	108
61.1	#	sa-sr	oval	80	0.0903	0.0044	0.738	0.041	0.0593	0.0015	3217*	557	26	561	24	579	55	96
62.1	~	rounded	oval	90	0.1090	0.0038	0.923	0.035	0.0614	0.0009	53909	667	22	664	19	654	33	102
63.1	#	rounded	round	120	0.4110	0.0212	9.026	0.519	0.1593	0.0040	n. d.	2219	97	2341	53	2448	43	91
64.1	#	sa-sr	oval	60	0.1013	0.0036	0.856	0.035	0.0613	0.0013	4521	622	21	628	19	648	44	96

Grain .spot	#/~[1]	Round-ness	Grain Shape[2]	Grain length (nm)	Isotope ratios: $^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Ages (Ma): $^{206}Pb/^{204}Pb$[3]	$^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Concordance (%)[5]
65.1	#	sa-sr	round	50	0.0864	0.0042	0.716	0.039	0.0601	0.0016	7365	534	25	548	23	608	57	88 (101)
66.1	#	sa-sr	oval	100	0.1151	0.0038	0.989	0.040	0.0623	0.0014	n. d.	702	22	698	20	686	49	102
67.1	#	rounded	round	130	0.0896	0.0025	0.725	0.024	0.0587	0.0011	361854	553	15	554	14	556	39	100
68.1	~	rounded	oval	100	0.1206	0.0035	1.092	0.043	0.0657	0.0018	16669	734	20	749	21	796	57	92
69.1	~	sa-sr	round	70	0.1004	0.0027	0.870	0.031	0.0628	0.0015	89949	617	16	636	17	702	49	88 (97)
70.1	*mix*				*0.0892*	*0.0022*	*0.739*	*0.024*	*0.0601*	*0.0012*	*2032**	*551*	*13*	*562*	*14*	*607*	*44*	*91*
71.1					*0.2475*	*0.0061*	*3.860*	*0.149*	*0.1131*	*0.0033*	*11863*	*1426*	*32*	*1605*	*31*	*1850*	*53*	*77*
72.1	#	sa-sr	elongated	160	0.1021	0.0038	0.884	0.040	0.0628	0.0015	4754	627	22	643	21	702	52	89 (100)
73.1	#	sa-sr	oval	140	0.0907	0.0026	0.766	0.034	0.0613	0.0021	7261	560	15	577	20	648	74	86 (100)
74.1	#	euhedral	elongated	130	0.1008	0.0028	0.859	0.030	0.0618	0.0014	6351	619	16	629	17	667	48	93
75.1	#	sa-sr	elongated	120	0.0819	0.0027	0.649	0.027	0.0575	0.0014	837*	507	16	508	16	511	54	99
76.1	#	sa-sr	oval	70	0.0904	0.0021	0.754	0.029	0.0604	0.0019	5134	558	13	570	17	620	66	90
77.1	~	sa-sr	oval	120	0.1137	0.0021	0.979	0.028	0.0625	0.0014	35213	694	12	693	14	691	47	100
78.1	~	sa-sr	elongated	220	0.1039	0.0027	0.900	0.036	0.0628	0.0019	9396	637	16	652	19	702	66	91
80.1	#	sa-sr	oval	140	0.1016	0.0032	0.853	0.035	0.0609	0.0016	16495	624	18	626	19	636	57	98
81.1	#	rounded	oval	120	0.4015	0.0088	7.298	0.325	0.1318	0.0051	31838	2176	40	2149	40	2123	68	103
82.1	#	sa-sr	elongated	140	0.3718	0.0078	6.521	0.272	0.1272	0.0046	26729	2038	36	2049	37	2060	64	99
83.1	#	sa-sr	elongated	140	0.1081	0.0027	0.934	0.044	0.0627	0.0025	4457*	662	16	670	23	698	85	95
84.1	#	rounded	oval	140	0.1097	0.0026	0.951	0.041	0.0629	0.0022	7089	671	15	679	21	703	76	95
85.1	#	rounded	oval	130	0.0986	0.0022	0.845	0.038	0.0621	0.0025	5689	606	13	622	21	679	85	89 (104)
86.1	~	rounded	elongated	140	0.6662	0.0265	25.857	1.402	0.2815	0.0104	41722	3290	100	3341	53	3371	58	98
87.1					*0.0925*	*0.0038*	*0.822*	*0.047*	*0.0645*	*0.0026*	*9981*	*570*	*22*	*609*	*26*	*757*	*85*	*75*
88.1	~	sa-sr	round	80	0.1546	0.0072	1.664	0.126	0.0781	0.0047	4368*	926	40	995	48	1150	120	81 (94)
89.1	~c	sa-sr	elongated	160	0.1028	0.0040	0.884	0.048	0.0624	0.0024	14802	631	23	643	26	687	82	92
90.1	#	sa-sr	oval	120	0.0934	0.0036	0.764	0.042	0.0593	0.0023	12399	576	21	576	24	577	84	100
91.1	#	sa-sr	oval	110	0.1054	0.0039	0.900	0.039	0.0619	0.0014	38088	646	23	652	21	671	47	96
92.1					*0.1078*	*0.0041*	*1.825*	*0.081*	*0.1228*	*0.0029*	*1939**	*660*	*24*	*1054*	*29*	*1997*	*42*	*33*
93.1	#	sa-sr	elongated	120	0.1057	0.0041	0.888	0.038	0.0609	0.0011	11916	648	24	645	20	636	37	102
94.1	~	sa-sr	oval	100	0.1461	0.0057	1.400	0.061	0.0695	0.0013	23669	879	32	889	26	913	40	96
95.1					*0.0836*	*0.0025*	*0.764*	*0.049*	*0.0662*	*0.0037*	*1637**	*518*	*15*	*576*	*28*	*814*	*118*	*64*
96.1	~	sa-sr	round	100	0.0833	0.0027	0.704	0.032	0.0612	0.0019	6874	516	16	541	19	648	68	80 (92)
97.1	#	sa-sr	elongated	220	0.1269	0.0027	1.091	0.036	0.0624	0.0016	5171	770	15	749	17	687	54	112 (102)
98.1	#	euhedral	round	70	0.1061	0.0026	0.870	0.041	0.0595	0.0024	538*	650	15	636	22	586	87	111 (94)
99.1	#	sa-sr	oval	140	0.5749	0.0097	17.000	0.451	0.2145	0.0044	172070	2928	40	2935	25	2940	33	100
100.1	#	sa-sr	round	120	0.3407	0.0120	6.108	0.260	0.1300	0.0031	57545	1890	58	1991	37	2098	42	90
101.1	~	sa-sr	elongated	190	0.0813	0.0023	0.673	0.023	0.0600	0.0012	1661*	504	14	523	14	605	42	83 (92)
102.1					*0.0692*	*0.0022*	*0.578*	*0.022*	*0.0606*	*0.0014*	*19955*	*431*	*13*	*463*	*14*	*624*	*48*	*69*
103.1	~	sa-sr	elongated	150	0.0886	0.0038	0.731	0.049	0.0598	0.0031	840*	547	23	557	29	600	110	92
104.1	~	rounded	oval	110	0.1570	0.0038	1.527	0.051	0.0705	0.0016	6735*	940	21	941	20	944	47	100
105.1	~	rounded	elongated	140	0.1093	0.0036	0.989	0.043	0.0656	0.0019	2258	669	21	698	22	794	61	84 (94)
106.1	~	sa-sr	oval	90	0.0942	0.0025	0.738	0.038	0.0568	0.0025	1309*	581	15	561	22	484	99	120 (97)
107.1	#c	sa-sr	round	80	0.0984	0.0029	0.847	0.029	0.0624	0.0010	4445	605	17	623	16	687	34	88 (95)
108.1	#	sa-sr	oval	90	0.1332	0.0037	1.226	0.041	0.0667	0.0012	39780	806	21	812	18	829	36	97
109.1	#	rounded	oval	110	0.0896	0.0020	0.756	0.021	0.0612	0.0010	139585	553	12	572	12	646	34	86 (92)
110.1	~	sa-sr	oval	100	0.1062	0.0027	0.915	0.034	0.0625	0.0017	n. d.*	651	16	660	18	691	58	94
111.1	~	sa-sr	round	130	0.1036	0.0023	0.903	0.025	0.0632	0.0011	5087	636	13	653	14	715	37	89 (96)
112.1	*mix*				*0.3578*	*0.0074*	*6.211*	*0.158*	*0.1259*	*0.0019*	*21269*	*1972*	*35*	*2006*	*22*	*2041*	*26*	*97*
113.1	#	euhedral	oval	90	0.1095	0.0016	0.937	0.018	0.0620	0.0008	16509	669.9	9.4	671.1	9.5	675	26	99
114.1	~	rounded	round	160	0.1025	0.0027	0.858	0.048	0.0607	0.0030	1376*	629	16	629	26	630	110	100
115.1	#	euhedral	round	80	0.0995	0.0024	0.818	0.024	0.0597	0.0010	1370*	611	14	607	13	591	36	103
116.1					*0.0824*	*0.0049*	*0.761*	*0.077*	*0.0669*	*0.0054*	*293**	*511*	*29*	*574*	*44*	*840*	*170*	*61*
117.1					*0.0726*	*0.0020*	*0.603*	*0.020*	*0.0602*	*0.0011*	*683**	*452*	*12*	*479*	*13*	*612*	*39*	*74*
118.1	#	sa-sr	elongated	100	0.1012	0.0026	0.847	0.026	0.0607	0.0011	n. d.	621	15	623	14	628	39	99
119.1					*0.2017*	*0.0128*	*2.755*	*0.187*	*0.0991*	*0.0023*	*11852*	*1184*	*69*	*1343*	*51*	*1607*	*44*	*74*
120.1	#	sa-sr	elongated	130	0.2412	0.0084	2.850	0.106	0.0857	0.0011	330492	1393	44	1369	28	1332	26	105
121.1	#	rounded	round	80	0.0947	0.0033	0.799	0.032	0.0612	0.0011	n. d.	583	20	596	18	647	38	90
122.1	*mix*				*0.1030*	*0.0042*	*0.868*	*0.040*	*0.0611*	*0.0014*	*2055**	*632*	*24*	*634*	*22*	*644*	*49*	*98*

Grain #/~[1] .spot		Round-ness	Grain Shape[2]	Grain length (nm)	Isotope ratios: $^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Ages (Ma): $^{206}Pb/^{204}Pb$[3]	$^{206}Pb/^{238}U$	2σ	$^{207}Pb/^{235}U$	2σ	$^{207}Pb/^{206}Pb$	2σ	Concordance (%)[5]
123.1	#	sa-sr	elongated	110	0.0902	0.0033	0.732	0.029	0.0589	0.0008	25210	556	19	558	17	564	31	99
124.1	~	rounded	round	120	0.1080	0.0054	0.974	0.051	0.0654	0.0010	4735	661	31	691	26	788	34	84 (92)
125.1	#	sa-sr	elongated	100	0.2051	0.0090	2.335	0.106	0.0826	0.0010	5730	1203	48	1223	32	1259	24	96
126.1					*0.0807*	*0.0046*	*0.705*	*0.043*	*0.0633*	*0.0013*	*10776*	*500*	*27*	*542*	*25*	*720*	*44*	*70*
127.1	#	rounded	elongated	190	0.1112	0.0049	0.947	0.044	0.0618	0.0011	6169	679	28	677	23	667	37	102

n. d. = not detected, sa-sr = subangular to subrounded

[1]# = Zoning interpreted to be of magmatic origin; ~ = zoning and homogeneous areas estimated to be of metamorphic origin; c = core / inner zoning; mix = more than one crystallisation phase was analysed – corresponding ages were not used further.

[2]Length to width ratios are > 1.6 for elongated grains, 1.3-1.6 for oval grains and < 1.3 for round grains.

[3]Correction for common Pb was made using the measured $^{206}Pb/^{204}Pb$ ratio (marked with *).

[4]f_{206} = percentage of ^{206}Pb that is common Pb.

[5]100 % denotes a concordant analysis. Ages with < 90 % and > 110 % concordance when the 2σ uncertainties are considered (marked in brackets) were not used further.

Publications cited in the Supplement

ADAMS, C. J., CAMPBELL, H. J., AND GRIFFIN, W. L., 2007. Provenance comparisons of Permian to Jurassic tectonostratigraphic terranes in New Zealand: perspectives from detrital zircon age patterns: Geological Magazine, v. 144, p. 701-729.

JACKSON, S. E., PEARSON, N. J., GRIFFIN, W. L., AND BELOUSOVA, E. A., 2004. The application of laser ablation-inductively coupled plasma-mass spectrometry to in situ U-Pb zircon geochronology: Chemical Geology, v. 211, p. 47-69.

KOOIJMAN, H. J., 2009. U-Pb dating of zircon and rutile by laser ablation ICP-MS: time constraints on metamorphic processes PhD thesis, Westfälische Wilhelms-Universität Münster, Germany, 131 pp.

LUDWIG, K. R., 2001. User's manual for Isoplot/Ex rev. 2.49, a geochronological toolkit for Microsoft Excel. Berkeley Geochronology Centre Special Publications, v. 1a, 55 p.

SIRCOMBE, K. N., 2004. AgeDisplay: an Excel workbook to evaluate and display univariate geochronological data using binned frequency histograms and probability density distributions: Computers and Geosciences, v. 30, p. 21-31.

STACEY, J. S., AND KRAMERS, J. D., 1975. Approximation of terrestrial lead isotope evolution by a two-stage model: Earth and Planetary Science Letters, v. 26, p. 207-221.

WIEDENBECK, M., ALLÉ, P., CORFU, F., GRIFFIN, W. L., MEIER, M., OBERLI, F., VON QUADT, A., RODDICK, J. C., AND SPIEGEL, W., 1995. Three natural zircon standards for U-Th-Pb, Lu-Hf, trace element and REE analyzes: Geostandards Newsletter, v. 19, p. 1-23.