

Koshnaw et al. supplemental data

Appendix A:

Zircon U-Pb geochronology method

After the standard mineral separation procedure of getting the samples through jaw-crusher, water table, heavy liquid, and magnetic separation, the separated zircon grains from the Red Bed Series samples were put on a double-sided tape mount. The zircon U-Pb data were collected by the laser ablation inductively coupled plasma mass spectrometry (LA-ICP-MS) by PhotonMachine Analyte G.2, using a 30 μ m diameter beam, with a Helex sample cell and Thermo Element2 ICP-MS. The reference standard GJ-1 zircon (601.7 ± 1.3 Ma $^{206}\text{Pb}/^{238}\text{U}$ age; Jackson et al., 2004)* was used to check the fractionation correction of the unknown grains. The reported zircon U-Pb age in this study represent discordance age <20 % with 2σ analytical uncertainty. The age concordance was determined based on the age of $^{206}\text{Pb}/^{238}\text{U}$ for zircon grains <950 Ma, and the $^{207}\text{Pb}/^{206}\text{Pb}$ age for grains >950 Ma.

* 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, 211(1-2), pp.47-69.

Appendix B

Table 1: Sample information

Site	Sample	Stratigraphic unit	Age	Longitude	Latitude
Choman	CH17M4	Merga	Miocene (?)	44.717972	36.67625
Choman	CH17M5	Merga	Miocene (?)	44.710444	36.671417
Choman	CH17M6	Merga	Miocene (?)	44.710472	36.669361
Choman	CH17S10	Suwais	late oligocene	44.820389	36.547861
Shetna	SH17S4	Suwais	late oligocene	36.815122	44.39811
Mawat	MT17S5	Suwais	late oligocene	35.797444	45.459639

Appendix B

Table 2: U-Pb data

Grain #	[U] ppm	U/Th	207/235		206/238		RHO	207/235		206/238		207/206		Best age		
			Age	2 σ error	Age	2 σ error		Age (Ma)	2 σ error	Age (Ma)	2 σ error	Age (Ma)	2 σ error	(Ma)	2 σ error	% Disc.
CH17M4_36	623	0.559	0.0417	0.0032	0.00554	0.00013	0.31185	41.4	3.1	35.59	0.85	410	170	35.6	0.9	14.0
CH17M4_2	192.4	0.894	0.0351	0.003	0.00556	0.00014	0.055786	35	2.9	35.76	0.9	20	150	35.8	0.9	2.2
CH17M4_58	167.8	0.93	0.036	0.0037	0.00565	0.00016	0.14113	35.8	3.6	36.3	1	20	170	36.3	1.0	1.4
CH17M4_59	180.4	0.7586	0.0393	0.0031	0.00565	0.00013	0.079265	39	3	36.31	0.81	160	140	36.3	0.8	6.9
CH17M4_80	560	0.591	0.0396	0.0023	0.00566	0.00011	0.016825	39.4	2.2	36.39	0.71	210	120	36.4	0.7	7.6
CH17M4_82	257	0.6202	0.0394	0.0033	0.00572	0.00016	0.044862	39.1	3.2	36.8	1	190	170	36.8	1.0	5.9
CH17M4_49	167	1.012	0.0406	0.0042	0.00575	0.00021	0.12858	40.3	4.1	36.9	1.3	210	200	36.9	1.3	8.4
CH17M4_107	131.4	1.035	0.0402	0.0032	0.00576	0.00016	0.086664	39.8	3.1	37	1.1	180	150	37.0	1.1	7.0
CH17M4_83	770	0.624	0.0398	0.002	0.00581	0.00011	0.06763	39.6	1.9	37.31	0.69	170	100	37.3	0.7	5.8
CH17M4_54	130.4	1.269	0.0383	0.0032	0.00582	0.00014	0.12074	38	3.1	37.38	0.91	80	150	37.4	0.9	1.6
CH17M4_46	265.9	0.7437	0.0398	0.0031	0.00582	0.00015	0.27475	39.6	3.1	37.43	0.97	160	150	37.4	1.0	5.5
CH17M4_53	484	0.637	0.0371	0.0017	0.00583	0.000087	0.038904	37.2	1.6	37.48	0.56	35	88	37.5	0.6	0.8
CH17M4_18	150.4	0.779	0.0409	0.006	0.00583	0.00028	0.031109	40.6	5.8	37.5	1.8	190	270	37.5	1.8	7.6
CH17M4_35	194.9	0.936	0.0387	0.0077	0.00583	0.00028	0.28999	38.4	7.6	37.5	1.8	60	340	37.5	1.8	2.3
CH17M4_38	427	0.792	0.0375	0.0034	0.00584	0.00013	0.030527	37.3	3.3	37.52	0.81	80	180	37.5	0.8	0.6
CH17M4_117	953	0.781	0.0375	0.0024	0.00584	0.00013	0.21795	37.3	2.3	37.53	0.85	40	120	37.5	0.9	0.6
CH17M4_50	179.2	1.176	0.0381	0.003	0.00583	0.00013	0.017551	37.8	2.9	37.57	0.87	50	140	37.6	0.9	0.6
CH17M4_6	305	1.004	0.0378	0.0024	0.00586	0.0001	0.083708	37.5	2.3	37.64	0.67	40	110	37.6	0.7	0.4
CH17M4_7	505.3	1.264	0.0386	0.0022	0.00586	0.00012	0.24804	38.4	2.2	37.64	0.76	130	120	37.6	0.8	2.0
CH17M4_1	138.1	1.097	0.0386	0.0033	0.00587	0.00015	0.069084	38.3	3.3	37.7	0.96	80	160	37.7	1.0	1.6
CH17M4_44	177.2	0.6534	0.0399	0.004	0.00586	0.00018	0.034495	39.6	3.9	37.7	1.2	190	200	37.7	1.2	4.8
CH17M4_19	463	0.867	0.0383	0.0023	0.00588	0.00012	0.036831	38.1	2.2	37.77	0.75	80	120	37.8	0.8	0.9
CH17M4_39	373	0.888	0.0392	0.0022	0.00588	0.00012	0.1784	39	2.2	37.79	0.76	130	120	37.8	0.8	3.1
CH17M4_3	137.6	1.117	0.0399	0.0044	0.00588	0.00021	0.025244	39.6	4.3	37.8	1.3	180	220	37.8	1.3	4.5
CH17M4_9	111.2	1.067	0.0396	0.0036	0.00588	0.00018	0.029254	39.2	3.5	37.8	1.1	130	160	37.8	1.1	3.6
CH17M4_42	424	0.6369	0.0395	0.004	0.00589	0.00019	0.14914	39.3	3.9	37.8	1.2	120	190	37.8	1.2	3.8
CH17M4_45	476	0.719	0.0392	0.0019	0.00588	0.0001	0.05147	39	1.9	37.82	0.66	120	100	37.8	0.7	3.0
CH17M4_32	369	1.103	0.0377	0.0022	0.00589	0.0001	0.024723	37.5	2.2	37.83	0.65	30	110	37.8	0.7	0.9
CH17M4_84	140.7	0.857	0.0359	0.004	0.00589	0.0002	0.11034	35.6	3.9	37.9	1.3	-50	190	37.9	1.3	6.5
CH17M4_22	325.6	0.869	0.0396	0.0041	0.00591	0.00023	0.026578	39.3	4	38	1.5	130	210	38.0	1.5	3.3
CH17M4_111	201	1.261	0.0393	0.0024	0.00592	0.00013	0.023005	39	2.4	38.07	0.81	110	120	38.1	0.8	2.4
CH17M4_100	292	1.023	0.0408	0.0031	0.00595	0.00014	0.30643	40.5	3	38.24	0.87	200	140	38.2	0.9	5.6
CH17M4_25	571	0.838	0.0388	0.0015	0.005987	0.000081	0.17062	38.6	1.5	38.48	0.52	60	74	38.5	0.5	0.3
CH17M4_17	281.2	0.904	0.044	0.0027	0.00599	0.00012	0.021737	43.7	2.6	38.52	0.8	330	130	38.5	0.8	11.9
CH17M4_112	673	0.955	0.039	0.0022	0.006	0.00015	0.021948	38.8	2.1	38.55	0.96	90	120	38.6	1.0	0.6
CH17M4_23	255	1.051	0.0409	0.0029	0.00601	0.00014	0.017559	40.6	2.8	38.6	0.87	160	130	38.6	0.9	4.9
CH17M4_90	607	0.848	0.042	0.0038	0.00602	0.00015	0.04953	41.7	3.7	38.68	0.95	220	210	38.7	1.0	7.2
CH17M4_81	305	0.7416	0.0417	0.0038	0.00602	0.00017	0.029049	41.4	3.7	38.7	1.1	180	170	38.7	1.1	6.5
CH17M4_11	330	1.012	0.042	0.0023	0.00602	0.00011	0.032466	42.3	2.4	38.72	0.7	220	110	38.7	0.7	8.5
CH17M4_21	389	0.821	0.0437	0.0042	0.00602	0.00012	0.067804	41.7	2.7	38.72	0.76	180	110	38.7	0.8	7.1
CH17M4_113	275	1.131	0.039	0.0022	0.00604	0.00013	0.069564	38.7	2.1	38.81	0.83	70	110	38.8	0.8	0.3
CH17M4_114	2360	3.18	0.0424	0.0031	0.00607	0.00019	0.060777	42.2	3	39	1.2	210	130	39.0	1.2	7.6
CH17M4_5	188	1.156	0.0417	0.0031	0.00607	0.00014	0.076951	41.4	3	39.01	0.91	180	140	39.0	0.9	5.8
CH17M4_108	414	1.53	0.044	0.0031	0.00607	0.00011	0.048622	43.5	3	39.03	0.69	250	110	39.0	0.7	10.3
CH17M4_55	461	1.325	0.0439	0.0027	0.00608	0.00012	0.17949	43.6	2.6	39.08	0.79	270	130	39.1	0.8	10.4
CH17M4_69	510	0.868	0.0431	0.0034	0.00609	0.00014	0.3244	42.8	3.3	39.13	0.92	230	170	39.1	0.9	8.6
CH17M4_103	122.3	1.007	0.0426	0.005	0.0061	0.00021	0.014879	42	4.9	39.2	1.3	140	210	39.2	1.3	6.7
CH17M4_85	659.4	0.6211	0.0406	0.002	0.00611	0.00014	0.041294	40.4	1.9	39.27	0.9	120	100	39.3	0.9	2.8
CH17M4_87	231	0.986	0.0388	0.0031	0.00611	0.00014	0.036162	38.5	3	39.29	0.92	10	140	39.3	0.9	2.1
CH17M4_72	244	0.926	0.0395	0.0028	0.00612	0.00012	0.064622	39.2	2.7	39.31	0.79	70	130	39.3	0.8	0.3
CH17M4_86	130	0.89	0.0455	0.0086	0.00612	0.00034	0.073593	44.8	8.3	39.4	2.2	230	340	39.4	2.2	12.1
CH17M4_13	518	0.85	0.04	0.0027	0.00614	0.00013	0.17568	39.7	2.6	39.44	0.8	60	120	39.4	0.8	0.7
CH17M4_30	173.8	1.298	0.0417	0.0047	0.00615	0.00021	0.057134	41.3	4.5	39.5	1.4	140	210	39.5	1.4	4.4
CH17M4_4	388	0.641	0.0412	0.0033	0.00616	0.00031	0.035451	41	3.2	39.6	2	140	150	39.6	2.0	3.4
CH17M4_66	383	0.829	0.0397	0.0019	0.006166	0.000099	0.0077177	39.5	1.8	39.62	0.63	47	90	39.6	0.6	0.3
CH17M4_51	699	1.027	0.0414	0.0035	0.00617	0.00014	0.14891	41.1	3.4	39.66	0.9	110	180	39.7	0.9	3.5
CH17M4_8	215	1.245	0.041	0.0027	0.00618	0.00014	0.1981	40.6	2.6	39.68	0.91	140	200	39.7	0.9	2.3
CH17M4_75	1270	0.3163	0.0394	0.0018	0.00619	0.00013	0.28634	39.2	1.8	39.79	0.8	31	81	39.8	0.8	1.5
CH17M4_63	557	0.872	0.0434	0.002	0.006194	0.00009	0.17254	43	1.9	39.8	0.57	240	100	39.8	0.6	7.4
CH17M4_10	339	0.897	0.0416	0.0024	0.00621	0.00013	0.13234	41.3	2.3	39.89	0.82	130	110	39.9	0.8	3.4
CH17M4_115	97.5	0.834	0.0411	0.0045	0.00624	0.00021	0.039587	40.6	4.2	40.1	1.3	40	160	40.1	1.3	1.2
CH17M4_101	421	0.767	0.0407	0.0019	0.006252	0.00009										

CH17M4_37	353.1	4.74	5.93	0.12	0.3521	0.0033	0.88135	1960	17	1944	16	1970	22	1970.0	22.0	1.3
CH17M4_20	115.6	1.324	7.236	0.077	0.392	0.0034	0.82837	2139.2	9.6	2131	16	2149	14	2149.0	14.0	0.8

Grain #	[U] ppm	U/Tn	207/235		206/238		RHO	207/235		206/238		207/206		Best age		
			2 σ error	206/238	2 σ error	RHO	Age Ma	2 σ error	Age (Ma)	2 σ error	Age (Ma)	2 σ error	(Ma)	2 σ error	% Disc.	
CH17M5_109	161.9	1.098	0.0403	0.0033	0.0055	0.00015	0.024432	39.9	3.3	35.39	0.99	280	160	35.4	1.0	11.3
CH17M5_13	308	0.827	0.0383	0.0032	0.00551	0.00017	0.052495	38.1	3.1	35.4	1.1	210	160	35.4	1.1	7.1
CH17M5_65	251	1.752	0.0535	0.0022	0.00558	0.00013	0.11992	35.2	2.2	35.89	0.84	30	120	35.9	0.8	2.0
CH17M5_87	384	0.897	0.0432	0.0035	0.00562	0.00017	0.053422	42.9	3.4	36.1	1.1	410	170	36.1	1.1	15.9
CH17M5_15	81.7	1.065	0.0419	0.0043	0.00588	0.00021	0.084643	41.4	4.2	37.8	1.3	170	190	37.8	1.3	8.7
CH17M5_54	116.7	0.79	0.0414	0.0067	0.00595	0.00028	0.19189	41	6.5	38.3	1.8	190	300	38.3	1.8	6.6
CH17M5_1	379	1.291	0.0379	0.0018	0.005967	0.00009	0.10346	37.8	1.8	38.35	0.57	55	94	38.4	0.6	1.5
CH17M5_10	246.6	1.279	0.0431	0.0028	0.00609	0.00011	0.16485	42.7	2.7	39.16	0.69	210	120	39.2	0.7	8.3
CH17M5_72	109.4	0.745	0.042	0.0067	0.0061	0.00027	0.0042507	41.5	6.5	39.2	1.7	130	280	39.2	1.7	5.5
CH17M5_98	157.8	0.702	0.0463	0.0036	0.0063	0.00016	0.11669	45.7	3.5	40.5	1	270	150	40.5	1.0	11.4
CH17M5_120	342	0.972	0.0473	0.0061	0.00638	0.00036	0.13801	46.8	5.9	41	2.3	310	250	41.0	2.3	12.4
CH17M5_83	159.5	0.3825	0.0461	0.0052	0.00642	0.00022	0.11048	45.5	5	41.2	1.4	190	220	41.2	1.4	9.5
CH17M5_6	146.5	0.6939	0.0438	0.0035	0.00644	0.00015	0.20415	43.3	3.4	41.35	0.94	100	140	41.4	0.9	4.5
CH17M5_86	257.9	0.59	0.0428	0.0025	0.00647	0.00014	0.10346	42.4	2.4	41.57	0.87	110	100	41.6	0.9	2.0
CH17M5_24	129.7	0.777	0.0445	0.0037	0.00683	0.00017	0.019012	44	3.6	43.8	1.1	80	150	43.8	1.1	0.5
CH17M5_85	315	0.662	0.05	0.0028	0.00698	0.00015	0.05608	49.4	2.7	44.84	0.94	270	110	44.8	0.9	9.2
CH17M5_113	486	0.735	0.0525	0.0021	0.00776	0.00011	0.10701	51.9	2.1	49.81	0.67	150	80	49.8	0.7	4.0
CH17M5_57	566	0.24	0.0592	0.0039	0.00811	0.00017	0.059007	58.3	3.7	52.1	1.1	290	130	52.1	1.1	10.6
CH17M5_78	521	0.599	0.0592	0.0025	0.00841	0.00012	0.13747	58.3	2.4	53.99	0.77	215	78	54.0	0.8	7.4
CH17M5_29	327.9	0.8509	0.0585	0.0026	0.00848	0.00013	0.0834	57.6	2.5	54.41	0.86	187	88	54.4	0.9	5.5
CH17M5_44	590.8	0.686	0.0577	0.0021	0.00859	0.00011	0.12037	56.9	2	55.11	0.72	135	72	55.1	0.7	3.1
CH17M5_2	440	0.793	0.0571	0.0022	0.0086	0.00013	0.053822	56.3	2.1	55.2	0.82	111	78	55.2	0.8	2.0
CH17M5_103	545	0.782	0.0632	0.0035	0.00867	0.00014	0.24599	62.2	3.3	55.65	0.89	320	120	55.7	0.9	10.5
CH17M5_64	301.6	0.718	0.0586	0.004	0.00869	0.0002	0.12366	58.4	4	55.8	1.3	160	130	55.8	1.3	4.5
CH17M5_96	2400	0.3688	0.0575	0.0018	0.0087	0.00018	0.015381	56.8	1.8	55.8	1.2	128	90	55.8	1.2	1.8
CH17M5_47	375.3	1.005	0.0576	0.0022	0.00871	0.00014	0.23181	56.7	2.1	55.92	0.92	108	73	55.9	0.9	1.4
CH17M5_25	389	0.714	0.0609	0.0028	0.00879	0.00015	0.17851	59.9	2.7	56.42	0.96	177	86	56.4	1.0	5.8
CH17M5_112	710	0.305	0.0597	0.0026	0.00881	0.0002	0.33998	58.8	2.5	56.5	1.3	154	82	56.5	1.3	3.9
CH17M5_55	236	1.198	0.0583	0.0036	0.00912	0.00016	0.1742	57.3	3.5	58.5	1	20	110	58.5	1.0	2.1
CH17M5_80	397	0.621	0.0659	0.0032	0.00921	0.00015	0.25047	64.6	3	59.09	0.98	244	86	59.1	1.0	8.5
CH17M5_62	507	0.921	0.0633	0.0025	0.0093	0.00015	0.098957	62.2	2.3	59.69	0.93	156	79	59.7	0.9	4.0
CH17M5_116	327	0.76	0.0602	0.0045	0.00934	0.0002	0.019274	59.2	4.3	59.9	1.3	90	150	59.9	1.3	1.2
CH17M5_97	619.4	1.842	0.0619	0.0017	0.00948	0.0001	0.22734	60.9	1.6	60.79	0.65	95	56	60.8	0.7	0.2
CH17M5_95	605	0.599	0.0657	0.0021	0.00948	0.00012	0.011593	64.6	2	60.85	0.78	198	64	60.9	0.8	5.8
CH17M5_58	327	0.71	0.0639	0.0025	0.00978	0.00016	0.16543	63.1	2.4	62.7	1	101	75	62.7	1.0	0.6
CH17M5_77	410	0.682	0.067	0.0046	0.00992	0.0002	0.12204	65.7	4.4	63.6	1.3	150	130	63.6	1.3	3.2
CH17M5_41	108.3	1.189	0.1053	0.0075	0.01522	0.00031	0.16937	101.1	6.8	97.4	2	170	140	97.4	2.0	3.7
CH17M5_31	57.1	1.581	0.123	0.015	0.01773	0.00058	0.13415	117	13	113.3	3.7	160	230	113.3	3.7	3.2
CH17M5_63	279	0.94	0.1519	0.0047	0.02238	0.00027	0.022976	143.3	4.2	142.7	1.7	151	69	142.7	1.7	0.4
CH17M5_74	330	0.385	0.1559	0.0048	0.02258	0.00038	0.053211	147	4.3	143.9	2.4	209	76	143.9	2.4	2.1
CH17M5_91	451	1.299	0.1849	0.0042	0.02642	0.00025	0.32456	172.1	3.6	168.1	1.6	217	47	168.1	1.6	2.3
CH17M5_69	344	3.63	0.1835	0.0047	0.02652	0.00028	0.15969	170.8	4	168.7	1.7	211	56	168.7	1.7	1.2
CH17M5_102	581	1.44	0.1823	0.0036	0.027	0.00025	0.37786	169.8	3.1	171.7	1.6	151	40	171.7	1.6	1.1
CH17M5_104	1015	1.067	0.1862	0.0048	0.02699	0.00035	0.34739	173.2	4.1	171.7	2.2	190	53	171.7	2.2	0.9
CH17M5_100	130	1.202	0.307	0.017	0.03812	0.00094	0.15987	271	13	241.2	5.9	510	120	241.2	5.9	11.0
CH17M5_34	93	0.544	0.2877	0.0094	0.03986	0.00066	0.027859	255.7	7.4	251.9	4.1	277	72	251.9	4.1	1.5
CH17M5_21	105.1	0.6527	0.303	0.012	0.04158	0.00061	0.12757	269	9.5	262.6	3.8	309	84	262.6	3.8	2.4
CH17M5_38	103.1	1.292	0.324	0.011	0.04397	0.00066	0.058985	284	8.4	277.4	4	323	75	277.4	4.0	2.3
CH17M5_48	627	1.217	0.3464	0.0056	0.04734	0.00014	0.25102	301.7	4.2	298.1	3.1	322	38	298.1	3.1	1.2
CH17M5_108	333.3	1.345	0.487	0.032	0.0516	0.0012	0.19725	399	21	324.2	7.5	800	130	324.2	7.5	18.7
CH17M5_111	424	2.84	0.403	0.026	0.0522	0.0016	0.040115	343	19	328.2	9.8	430	120	328.2	9.8	4.3
CH17M5_33	166	0.846	0.421	0.016	0.0558	0.0011	0.044523	356	12	349.9	6.7	379	91	349.9	6.7	1.7
CH17M5_73	183.6	0.606	0.464	0.011	0.06072	0.00067	0.35957	385.7	7.9	380	4.1	408	53	380.0	4.1	1.5
CH17M5_84	2267	3.152	0.4933	0.0065	0.0648	0.00072	0.47867	407	4.4	404.7	4.4	421	28	404.7	4.4	0.6
CH17M5_71	817	0.929	0.563	0.012	0.0698	0.0013	0.3865	453.1	7.9	435.1	7.6	543	48	435.1	7.6	4.0
CH17M5_81	147.4	0.6166	0.542	0.014	0.06999	0.00065	0.13609	438.5	8.9	436.1	3.9	434	56	436.1	3.9	0.5
CH17M5_115	1115	1.654	0.579	0.014	0.0739	0.0012	0.52702	463.6	8.9	459.6	7	467	46	459.6	7.0	0.9
CH17M5_92	241.9	1.285	0.68	0.017	0.07892	0.00092	0.33043	526	10	489.6	5.5	676	51	489.6	5.5	6.9
CH17M5_20	749	2.03	0.756	0.012	0.09125											

CH17M5_94	1053	2.26	6.89	0.13	0.384	0.017	0.10639	2097	17	2096	81	2098	92	2098.0	92.0	0.1
CH17M5_4	94.4	1.332	6.62	0.083	0.3527	0.004	0.37872	2061	11	1947	19	2176	23	2176.0	23.0	10.5
CH17M5_51	287	0.977	8.97	0.11	0.4446	0.0045	0.54082	2334	11	2371	20	2302	18	2302.0	18.0	3.0
CH17M5_61	59.7	0.594	8.97	0.24	0.433	0.01	0.91706	2332	26	2319	47	2348	24	2348.0	24.0	1.2
CH17M5_32	107	1.24	9.98	0.21	0.4538	0.0062	0.82326	2422	23	2410	28	2432	28	2432.0	28.0	0.9
CH17M5_19	258.6	0.803	9.51	0.16	0.4186	0.0045	0.65222	2386	15	2253	20	2501	20	2501.0	20.0	9.9
CH17M5_105	289	1.37	10.96	0.18	0.4786	0.0073	0.90641	2515	16	2518	32	2510	12	2510.0	12.0	0.3
CH17M5_119	269	1.518	11.23	0.12	0.4927	0.0047	0.55212	2541.4	9.5	2582	20	2512	16	2512.0	16.0	2.8
CH17M5_49	263.9	0.932	10.47	0.19	0.4555	0.0082	0.81639	2476	17	2418	36	2522	19	2522.0	19.0	4.1
CH17M5_56	86.2	1.151	13.48	0.27	0.587	0.01	0.67728	2711	19	2975	42	2522	26	2522.0	26.0	18.0
CH17M5_42	550	1.29	12.116	0.093	0.5204	0.0043	0.78345	2612.5	7.2	2700	18	2547.6	8.3	2547.6	8.3	6.0
CH17M5_39	159.7	1.321	11.9	0.17	0.5006	0.0066	0.64207	2596	14	2615	28	2579	20	2579.0	20.0	1.4
CH17M5_12	226.4	1.45	12.13	0.16	0.4849	0.0065	0.5821	2612	12	2550	28	2669	16	2669.0	16.0	4.5

Grain #	[U] ppm	U/Th	207/235		206/238		RHO	207/235		206/238		207/206		Best age		
			Age	Ma	2 σ error	Age	Ma	2 σ error	Age	Ma	2 σ error	(Ma)	2 σ error	% Disc.		
CH17M6_45	204.6	1.04	0.0354	0.0029	0.0052	0.0004	0.093947	35.7	3	33.45	0.87	140	160	33.5	0.9	6.3
CH17M6_65	800	0.52	0.0379	0.002	0.00531	0.00011	0.38174	37.7	2	34.12	0.71	270	110	34.1	0.7	9.5
CH17M6_76	224	0.753	0.0356	0.0048	0.00545	0.00018	0.072034	35.5	4.7	35	1.1	50	240	35.0	1.1	1.4
CH17M6_29	369.7	1.335	0.0376	0.0034	0.00549	0.00015	0.12759	37.4	3.3	35.27	0.96	160	170	35.3	1.0	5.7
CH17M6_14	294.6	1.333	0.0397	0.0033	0.00556	0.00017	0.012982	39.4	3.2	35.7	1.1	290	180	35.7	1.1	9.4
CH17M6_99	973	0.5286	0.0384	0.0026	0.00564	0.00012	0.17224	38.2	2.5	36.29	0.74	160	130	36.3	0.7	5.0
CH17M6_22	488	0.787	0.0391	0.0019	0.00569	0.0001	0.10049	38.9	1.9	36.57	0.67	181	98	36.6	0.7	6.0
CH17M6_55	493	0.4336	0.0371	0.002	0.00573	0.00012	0.10679	37	2	36.85	0.79	90	110	36.9	0.8	0.4
CH17M6_24	515	0.675	0.0404	0.003	0.00583	0.00011	0.17753	40.2	2.9	37.45	0.71	180	150	37.5	0.7	6.8
CH17M6_31	600	0.816	0.0381	0.0025	0.00588	0.00012	0.021262	38	2.5	37.82	0.78	60	120	37.8	0.8	0.5
CH17M6_118	181	0.984	0.0409	0.0033	0.00589	0.00013	0.09422	40.5	3.2	37.85	0.86	140	140	37.9	0.9	6.5
CH17M6_119	565	0.567	0.0399	0.0022	0.00592	0.00011	0.042792	39.7	2.1	38.06	0.74	170	120	38.1	0.7	4.1
CH17M6_63	259	0.636	0.0429	0.003	0.00599	0.00013	0.086994	42.5	2.9	38.5	0.83	240	130	38.5	0.8	9.4
CH17M6_42	212	0.6813	0.0444	0.003	0.00652	0.00016	0.056202	43.9	2.9	41.9	1	140	120	41.9	1.0	4.6
CH17M6_17	371	1.627	0.0488	0.0023	0.0067	0.0001	0.14908	48.3	2.2	43.04	0.65	275	92	43.0	0.7	10.9
CH17M6_61	232	0.6809	0.0503	0.003	0.00692	0.00014	0.083276	49.7	2.9	44.48	0.9	290	120	44.5	0.9	10.5
CH17M6_53	154.5	0.964	0.045	0.0035	0.00692	0.00017	0.038661	44.5	3.3	44.5	1.1	70	140	44.5	1.1	0.0
CH17M6_41	184.1	0.7812	0.0446	0.0027	0.00695	0.00015	0.026295	44.2	2.7	44.67	0.96	30	110	44.7	1.0	1.1
CH17M6_87	220	1.029	0.0475	0.0027	0.00724	0.00015	0.10236	47	2.6	46.49	0.98	100	110	46.5	1.0	1.1
CH17M6_56	271.3	0.855	0.0541	0.004	0.00791	0.00016	0.011839	53.4	3.8	50.8	1	150	140	50.8	1.0	4.9
CH17M6_79	551	1.056	0.0527	0.0033	0.00811	0.00018	0.030781	52.1	3.2	52.1	1.1	80	120	52.1	1.1	0.0
CH17M6_6	367	0.906	0.0571	0.0027	0.00816	0.00014	0.042548	56.3	2.6	52.41	0.86	213	91	52.4	0.9	6.9
CH17M6_16	614	0.664	0.0537	0.0016	0.00823	0.00011	0.062876	53.1	1.6	52.82	0.73	86	62	52.8	0.7	0.5
CH17M6_78	623	0.541	0.0533	0.0029	0.00826	0.00015	0.23429	52.7	2.8	53.01	0.99	50	100	53.0	1.0	0.6
CH17M6_20	441	0.794	0.0544	0.0034	0.00832	0.00017	0.15937	53.7	3.3	53.4	1.1	80	120	53.4	1.1	0.6
CH17M6_21	549	0.784	0.0552	0.002	0.00835	0.00011	0.12924	54.7	2	53.58	0.73	97	70	53.6	0.7	2.0
CH17M6_82	335.2	0.952	0.0558	0.0031	0.00835	0.00019	0.064483	55.1	2.9	53.6	1.2	180	120	53.6	1.2	2.7
CH17M6_27	550	0.794	0.0559	0.0021	0.008386	0.00096	0.10077	55.2	2	53.83	0.61	119	73	53.8	0.6	2.5
CH17M6_8	532	0.699	0.054	0.0026	0.00841	0.00014	0.25907	53.3	2.5	53.96	0.91	49	88	54.0	0.9	1.2
CH17M6_49	460	0.743	0.0561	0.0027	0.00842	0.00014	0.023184	55.3	2.6	54.08	0.88	118	97	54.1	0.9	2.2
CH17M6_106	1156	0.383	0.058	0.0015	0.00847	0.00013	0.14899	57.2	1.5	54.39	0.81	177	54	54.4	0.8	4.9
CH17M6_54	325.9	0.819	0.0553	0.0033	0.00852	0.00019	0.13813	54.5	3.1	54.7	1.2	70	120	54.7	1.2	0.4
CH17M6_96	503	0.789	0.0567	0.002	0.00853	0.00091	0.016987	55.9	1.9	54.71	0.58	117	71	54.7	0.6	2.1
CH17M6_68	601	0.73	0.054	0.0019	0.00853	0.00011	0.20575	53.3	1.8	54.75	0.69	32	67	54.8	0.7	2.7
CH17M6_72	354	1.012	0.0604	0.0024	0.00858	0.00014	0.16745	59.4	2.3	55.05	0.89	243	83	55.1	0.9	7.3
CH17M6_91	394	0.875	0.0573	0.0025	0.00858	0.00013	0.2435	56.5	2.4	55.06	0.84	135	85	55.1	0.8	2.5
CH17M6_117	557	0.651	0.0591	0.0021	0.00864	0.00011	0.23625	58.3	2	55.46	0.67	180	72	55.5	0.7	4.9
CH17M6_38	3076	0.2819	0.0559	0.0018	0.00869	0.00011	0.23174	55.2	1.7	55.79	0.72	51	62	55.8	0.7	1.1
CH17M6_71	385	1.015	0.0589	0.0024	0.00876	0.00013	0.05755	58	2.3	56.23	0.8	135	84	56.2	0.8	3.1
CH17M6_110	346	0.855	0.0569	0.0028	0.00877	0.00013	0.0209575	56.1	2.7	56.3	0.86	69	94	56.3	0.9	0.4
CH17M6_85	412	0.764	0.0593	0.0025	0.00882	0.00015	0.27232	58.4	2.4	56.63	0.98	151	84	56.6	1.0	3.0
CH17M6_102	235.2	0.792	0.0607	0.0047	0.00888	0.00023	0.082563	59.6	4.5	57.6	1.5	130	150	57.6	1.5	3.4
CH17M6_59	565	0.799	0.0605	0.002	0.0089	0.00019	0.01199	61.9	3.8	57.74	0.75	140	70	57.7	0.8	3.1
CH17M6_94	198.6	0.735	0.0656	0.0046	0.00909	0.00026	0.31082	59.3	5.4	59.6	1.7	60	170	59.6	1.7	0.5
CH17M6_97	327	1.049	0.058	0.0026	0.00902	0.00015	0.17254	57.1	2.5	57.91	0.97	64	85	57.9	1.0	1.4
CH17M6_95	171	0.644	0.0584	0.0041	0.00904	0.00018	0.068443	57.3	3.9	58	1.2	50	130	58.0	1.2	1.2
CH17M6_30	542	0.721	0.0607	0.0029	0.00911	0.00014	0.14688	59.7	2.8	58.49	0.91	117	92	58.5	0.9	2.0
CH17M6_88	432	0.899	0.0585	0.0023	0.00915	0.000										

CH17M6_11	122.4	0.995	1.737	0.041	0.1714	0.0023	0.10055	1021	15	1022	11	1019	52	1019.0	52.0	0.3
CH17M6_23	161.3	1.18	1.737	0.046	0.171	0.0025	0.083016	1021	17	1018	14	1022	64	1022.0	64.0	0.4
CH17M6_34	159.5	4.031	4.596	0.08	0.3115	0.0052	0.094598	1745	15	1746	26	1747	11	1747.0	11.0	0.1
CH17M6_2	218.1	1.078	4.111	0.042	0.2773	0.0025	0.32457	1655.9	8.4	1577	13	1752	21	1752.0	21.0	10.0
CH17M6_47	201.9	1	4.049	0.065	0.2737	0.004	0.50625	1643	13	1559	20	1752	28	1752.0	28.0	11.0
CH17M6_81	874	9.04	4.98	0.043	0.325	0.0025	0.69614	1815.4	7.2	1814	12	1817	12	1817.0	12.0	0.2
CH17M6_57	56.5	0.861	5.18	0.11	0.3326	0.006	0.69788	1847	17	1849	29	1832	27	1832.0	27.0	0.9
CH17M6_86	458.9	2.98	5.159	0.06	0.331	0.0036	0.63901	1845	9.9	1843	17	1846	17	1846.0	17.0	0.2
CH17M6_19	148	0.706	5.16	0.18	0.3	0.011	0.87426	1841	31	1836	56	1851	35	1851.0	35.0	0.8
CH17M6_115	250	2.06	5.694	0.051	0.3619	0.0025	0.58221	1929.6	7.8	1991	12	1863	14	1863.0	14.0	6.9
CH17M6_77	404	1.796	5.628	0.045	0.3463	0.0021	0.55585	1919.8	6.8	1917	10	1921	13	1921.0	13.0	0.2
CH17M6_108	344	1.87	5.68	0.14	0.3451	0.0043	0.85515	1917	13	1910	20	1931	16	1931.0	16.0	1.1
CH17M6_104	210.2	1.651	6.368	0.066	0.3701	0.0033	0.64151	2027	9.2	2029	16	2024	17	2024.0	17.0	0.2
CH17M6_92	648.6	2.374	6.279	0.068	0.3545	0.003	0.71287	2014.9	9.5	1956	14	2076	13	2076.0	13.0	5.8
CH17M6_39	103.3	0.904	8.59	0.16	0.4208	0.0054	0.89343	2292	18	2262	25	2317	19	2317.0	19.0	2.4
CH17M6_67	365	0.898	9.749	0.062	0.4545	0.0026	0.7789	2410.7	5.9	2415	12	2403.3	9.4	2403.3	9.4	0.5
CH17M6_75	205.6	0.3683	9.891	0.074	0.447	0.0035	0.60403	2424.1	6.9	2381	16	2456	12	2456.0	12.0	3.1
CH17M6_116	131	0.444	10.37	0.45	0.4671	0.0087	0.83792	2466	40	2471	38	2460	50	2460.0	50.0	0.4
CH17M6_64	155.4	0.579	9.41	0.13	0.4212	0.0054	0.64093	2378	13	2265	24	2474	21	2474.0	21.0	8.4
CH17M6_3	92.4	0.694	9.449	0.092	0.4218	0.0031	0.498	2381.5	9	2268	14	2479	15	2479.0	15.0	8.5
CH17M6_107	161.7	0.891	10.568	0.092	0.4642	0.0036	0.4102	2485.3	8.1	2458	16	2508	15	2508.0	15.0	2.0
CH17M6_98	55.9	0.9	10.97	0.16	0.4788	0.0067	0.5561	2518	14	2520	29	2521	22	2521.0	22.0	0.0
CH17M6_80	111	0.815	11.39	0.16	0.4826	0.0067	0.40416	2555	13	2538	29	2567	25	2567.0	25.0	1.1
CH17M6_111	128.1	1.093	12.61	0.12	0.4988	0.0051	0.58972	2650.3	9.3	2608	22	2686	16	2686.0	16.0	2.9
CH17M6_113	87	0.631	16.58	0.26	0.5696	0.0088	0.66977	2910	15	2905	36	2913	21	2913.0	21.0	0.3

Grain #	[U] ppm	U/Tm	207/235		206/238		RHO		207/235		206/238		207/206		Best age	
			Age	Ma	2σ error	Age	Ma	2σ error	Age	Ma	2σ error	Age	Ma	2σ error	(Ma)	2σ error
CH17S10_84	207	1.463	0.028	0.0027	0.00406	0.00014	0.073987	28	2.6	26.11	0.92	160	180	26.1	0.9	6.8
CH17S10_63	445	1.016	0.0408	0.002	0.00575	0.0001	0.085146	40.5	1.9	36.95	0.66	230	100	37.0	0.7	8.8
CH17S10_24	350	1.214	0.0381	0.0019	0.005922	0.000098	0.089269	37.9	1.9	38.06	0.63	55	99	38.1	0.6	0.4
CH17S10_99	312.6	1.015	0.0422	0.0025	0.005954	0.00015	0.032084	41.9	2.4	38.15	0.95	230	110	38.2	1.0	8.9
CH17S10_49	164	1.049	0.0407	0.0029	0.00595	0.00018	0.076951	40.4	2.8	38.2	1.2	230	150	38.2	1.2	5.4
CH17S10_55	123.2	0.6499	0.0407	0.0041	0.00594	0.00018	0.030851	40.2	4	38.2	1.1	120	180	38.2	1.1	5.0
CH17S10_58	123	0.752	0.0432	0.006	0.00594	0.00013	0.067035	42.7	5.8	38.2	2	230	260	38.2	2.0	10.5
CH17S10_101	173.2	0.7565	0.0456	0.0039	0.0064	0.00019	0.024453	45	3.8	41.1	1.2	210	170	41.1	1.2	8.7
CH17S10_75	134.2	0.763	0.0442	0.0036	0.0064	0.00017	0.10125	43.7	3.5	41.2	1.1	150	150	41.2	1.1	5.7
CH17S10_90	227	0.856	0.0531	0.0053	0.00675	0.0002	0.12516	52.3	5.1	43.4	1.2	390	200	43.4	1.2	17.0
CH17S10_80	242	0.709	0.0474	0.003	0.00684	0.00018	0.058299	47	2.9	43.9	1.2	230	140	43.9	1.2	6.6
CH17S10_50	372	0.7	0.0456	0.0027	0.00687	0.00019	0.2289	45.2	2.6	44.1	1.2	120	110	44.1	1.2	2.4
CH17S10_40	207	0.709	0.0512	0.0045	0.00715	0.00018	0.19236	50.5	4.4	45.9	1.2	220	170	45.9	1.2	9.1
CH17S10_98	439	0.728	0.0515	0.0025	0.00796	0.00017	0.00010602	50.9	2.4	51.1	1.1	90	100	51.1	1.1	0.4
CH17S10_117	256	1.028	0.0524	0.0027	0.00837	0.00015	0.007769	51.8	2.6	53.74	0.99	5	95	53.7	1.0	3.7
CH17S10_32	285	0.92	0.0552	0.003	0.0084	0.00015	0.14021	54.4	2.8	53.9	0.93	83	98	53.9	0.9	0.9
CH17S10_100	454	0.892	0.0554	0.0022	0.00844	0.00011	0.042597	54.6	2.1	54.21	0.71	87	79	54.2	0.7	0.7
CH17S10_86	297	1.206	0.0595	0.0033	0.00852	0.00015	0.043864	58.5	3.1	54.7	0.99	200	110	54.7	1.0	6.5
CH17S10_114	425	0.7072	0.0555	0.0022	0.00856	0.00012	0.030413	54.8	2.1	54.93	0.77	71	78	54.9	0.8	0.2
CH17S10_23	276	1.049	0.0636	0.0063	0.00856	0.00053	0.020122	62.6	6	55	3.4	360	250	55.0	3.4	12.1
CH17S10_47	311.2	1.084	0.0568	0.003	0.00861	0.00014	0.0047497	56	2.9	55.25	0.89	100	100	55.3	0.9	1.3
CH17S10_120	268.1	1.291	0.0542	0.0026	0.00861	0.00014	0.1343	53.4	2.5	55.28	0.89	19	91	55.3	0.9	3.5
CH17S10_48	488.1	0.507	0.0599	0.0038	0.00862	0.00022	0.024119	59	3.7	55.3	1.4	190	140	55.3	1.4	6.3
CH17S10_15	512	0.583	0.0625	0.0025	0.00869	0.00011	0.017542	61.5	2.4	55.77	0.73	278	84	55.8	0.7	9.3
CH17S10_20	291.2	0.955	0.0583	0.0025	0.0087	0.00013	0.17283	57.4	2.4	55.81	0.8	127	82	55.8	0.8	2.8
CH17S10_29	441	0.832	0.0591	0.0023	0.00874	0.00014	0.12877	58.3	2.2	56.07	0.89	162	81	56.1	0.9	3.8
CH17S10_56	436	1.019	0.0574	0.0022	0.00874	0.00013	0.19474	56.6	2.1	56.12	0.84	90	73	56.1	0.8	0.8
CH17S10_45	439	1.539	0.0626	0.0029	0.00875	0.00013	0.2181	61.6	2.8	56.13	0.82	263	91	56.1	0.8	8.9
CH17S10_34	292	1.135	0.059	0.0039	0.0088	0.00016	0.018445	58.6	3	57.5	1	170	110	57.5	1.0	2.8
CH17S10_28	306.5	1.106	0.0592	0.0028	0.00881	0.00014	0.069053	58.2	2.7	56.57	0.9	131	92	56.6	0.9	2.8
CH17S10_97	602	0.6954	0.0583	0.0021	0.00883	0.00012	0.11346	59.8	2.1	56.65	0.74	118	76	56.7	0.7	2.0
CH17S10_30	322	0.978	0.0596	0.0029	0.00904	0.00013	0.0309365	58.7	2.7	58	0.85	101	90	58.0	0.9	1.2
CH17S10_33	502.4	0.64	0.0608	0.0024	0.00914	0.00011	0.086615	59.8	2.3	58.65	0.72	117	78	58.7	0.7	1.9
CH17S10_71	376	0.765	0.0625	0.0035	0.00921	0.00016	0.0086749	61.4	3.3	59.1	1	140	110	59.1	1.0	3.7
CH17S10_6	606	0.599	0.0632	0.0021	0.00922	0.00011	0.088874	62.2	2	59.16	0.69	177	68	59.2	0.7	4.9
CH17S10_92	216	0.97	0.059	0.0062	0.00927											

CH17510_64	196.7	2.199	0.937	0.015	0.1095	0.0011	0.23825	670.9	7.9	670	6.3	681	38	670.0	6.3	0.1
CH17510_44	86.9	0.614	0.985	0.025	0.1096	0.0016	0.09376	696	13	670.3	9.3	777	63	670.3	9.3	3.7
CH17510_57	720	45.8	0.972	0.014	0.1127	0.0012	0.42985	688.9	7.2	688.3	6.9	690	29	688.3	6.9	0.1
CH17510_43	121.5	1.496	1.141	0.026	0.1187	0.0017	0.45013	771	12	723	10	913	45	723.0	10.0	6.2
CH17510_68	118.4	0.5609	1.109	0.029	0.1202	0.0016	0.24898	756	14	731.8	9.1	817	55	731.8	9.1	3.2
CH17510_21	136.9	0.6801	1.075	0.019	0.1213	0.0012	0.18375	739.7	9.5	737.7	6.7	741	41	737.7	6.7	0.3
CH17510_115	133	0.718	1.14	0.026	0.1221	0.0012	0.024145	773	13	742.7	7.1	848	55	742.7	7.1	3.9
CH17510_5	233	0.687	1.103	0.022	0.1239	0.0014	0.34747	754	11	753	8	751	45	753.0	8.0	0.1
CH17510_18	711	0.936	1.227	0.019	0.1343	0.0018	0.861	811.6	8.9	812	11	815	18	812.0	11.0	0.0
CH17510_67	201.7	2.755	1.321	0.017	0.1411	0.0011	0.25102	853.8	7.5	850.6	6.4	862	27	850.6	6.4	0.4
CH17510_37	317	2.491	1.374	0.022	0.1432	0.0013	0.08627	877.1	9.5	862.7	7.3	913	35	862.7	7.3	1.6
CH17510_88	187	0.8	1.448	0.03	0.1514	0.002	0.71598	906	12	910	11	898	29	910.0	11.0	0.4
CH17510_102	431	1.178	1.508	0.017	0.1529	0.0012	0.58887	932.8	6.8	917.3	7	967	20	917.3	7.0	1.7
CH17510_69	79.8	1.95	1.557	0.046	0.16	0.0028	0.44755	950	18	956	15	927	54	927.0	15.0	0.6
CH17510_27	382	2.88	1.549	0.022	0.158	0.0018	0.64729	948.7	8.6	945	10	959	23	945.0	10.0	0.4
CH17510_46	143.1	0.963	1.691	0.031	0.1705	0.0021	0.34471	1004	12	1015	12	982	38	982.0	38.0	3.4
CH17510_19	117.8	1.163	1.922	0.033	0.1838	0.0019	0.10436	1087	12	1087	10	1083	40	1083.0	40.0	0.4
CH17510_7	104.28	1.464	1.806	0.061	0.1715	0.0031	0.032728	1046	22	1020	17	1096	75	1096.0	75.0	6.9
CH17510_89	87.5	1.046	3.604	0.061	0.269	0.0033	0.43799	1548	13	1535	17	1565	30	1565.0	30.0	1.9
CH17510_76	759	1.621	4.216	0.04	0.3042	0.0031	0.58907	1676.7	7.9	1712	16	1631	17	1631.0	17.0	5.0
CH17510_4	63.8	1.088	4.417	0.08	0.2918	0.0032	0.51366	1713	15	1650	16	1789	31	1789.0	31.0	7.8
CH17510_46	45.1	0.2999	4.65	0.075	0.3037	0.0036	0.4747	1755	14	1709	18	1815	29	1815.0	29.0	5.8
CH17510_10	1051	3.72	4.733	0.07	0.3031	0.0049	0.59238	1773	12	1707	24	1850	25	1850.0	25.0	7.7
CH17510_93	165.5	2.076	5.769	0.059	0.3689	0.0029	0.60266	1941.4	8.6	2024	14	1853	15	1853.0	15.0	9.2
CH17510_73	439	2.42	5.413	0.069	0.3297	0.0054	0.8232	1886	11	1836	26	1951	21	1951.0	21.0	5.9
CH17510_79	243.7	1.629	5.927	0.063	0.3554	0.0029	0.4739	1964.5	9.2	1960	14	1969	18	1969.0	18.0	0.5
CH17510_91	185	5.077	0.093	0.2992	0.005	0.48046	1831	16	1687	25	1998	32	1998.0	32.0	15.6	
CH17510_110	267	5.04	6.219	0.067	0.3642	0.0037	0.62623	2006.1	9.4	2002	18	2010	16	2010.0	16.0	0.4
CH17510_95	124.6	8.09	6.36	0.067	0.3673	0.0031	0.42251	2025.7	9.2	2016	15	2035	18	2035.0	18.0	0.9
CH17510_96	261.3	6.5	5.938	0.081	0.3298	0.003	0.39124	1966	12	1837	15	2103	23	2103.0	23.0	12.6
CH17510_38	268	1.384	6.876	0.064	0.3633	0.0027	0.58274	2095.5	8	1997	13	2192	14	2192.0	14.0	8.9
CH17510_12	571	3.41	10.25	0.11	0.4642	0.0045	0.73132	2457	10	2458	20	2463	15	2463.0	15.0	0.2
CH17510_3	469	2.286	7.9	0.13	0.3577	0.0064	0.72342	2224	18	1971	30	2472	24	2472.0	24.0	20.3
CH17510_82	290.4	1.972	10.738	0.066	0.4747	0.0026	0.5689	2500.1	5.7	2504	12	2496.4	9.2	2496.4	9.2	0.3
CH17510_1	179.1	0.833	10.89	0.17	0.4801	0.0065	0.37275	2513	15	2527	28	2511	20	2511.0	20.0	0.6
CH17510_36	217.7	0.613	12.12	0.24	0.492	0.012	0.57843	2613	18	2579	53	2643	26	2643.0	26.0	2.4
CH17510_118	536	8.46	14.62	0.27	0.5254	0.0068	0.91834	2785	18	2720	29	2836	14	2836.0	14.0	4.1

Grain #	[U] ppm	U/Tm	207/235		206/238		207/206		Best age							
			Age	Ma	Age	Ma	Age	Ma	2σ error	% Disc.						
SH1754_78	132.8	1.442	0.0232	0.0031	0.00367	0.00017	0.01546	23.1	3	23.6	1.1	-10	210	23.6	1.1	2.2
SH1754_26	396	0.517	0.0379	0.0031	0.0054	0.00014	0.12466	37.7	3	34.73	0.91	200	150	34.7	0.9	7.9
SH1754_120	268	1.366	0.0382	0.0047	0.00569	0.00021	0.16771	37.9	4.6	36.6	1.3	100	220	36.6	1.3	3.4
SH1754_20	221.6	1.682	0.0398	0.0036	0.00584	0.00015	0.10609	39.4	3.5	37.51	0.96	100	160	37.5	1.0	4.8
SH1754_22	243.7	1.27	0.0398	0.003	0.00594	0.00015	0.036192	39.4	2.9	38.21	0.98	100	140	38.2	1.0	3.0
SH1754_83	125	1.44	0.043	0.0048	0.00598	0.00024	0.068145	42.4	4.7	38.4	1.6	210	200	38.4	1.6	9.4
SH1754_11	566	1.099	0.0406	0.0019	0.00599	0.0001	0.058131	40.3	1.9	38.49	0.66	154	96	38.5	0.7	4.5
SH1754_39	86	1.626	0.0387	0.0044	0.00599	0.00025	0.050089	38.8	4.4	38.5	1.6	200	200	38.5	1.6	0.8
SH1754_48	140.3	1.348	0.0439	0.0041	0.00604	0.0002	0.0089364	43.8	4.1	38.8	1.3	270	170	38.8	1.3	11.4
SH1754_88	160.1	1.557	0.0434	0.0065	0.00614	0.0002	0.027371	42.9	6.3	39.5	1.3	150	260	39.5	1.3	7.9
SH1754_13	267.5	1.03	0.0451	0.0043	0.00636	0.00017	0.012141	44.6	4.1	40.9	1.1	220	180	40.9	1.1	8.3
SH1754_41	369	0.971	0.0436	0.0038	0.00639	0.00013	0.032907	43.1	3.7	41.07	0.85	130	150	41.1	0.9	4.7
SH1754_112	177.6	1.002	0.0466	0.0054	0.00642	0.00025	0.13289	46	5.2	41.2	1.6	230	220	41.2	1.6	10.4
SH1754_34	1099	0.553	0.0407	0.0018	0.00645	0.00011	0.032623	40.5	1.8	41.46	0.71	20	84	41.5	0.7	2.4
SH1754_37	356	1.417	0.043	0.0025	0.00655	0.00013	0.067913	42.7	2.4	42.11	0.84	100	110	42.1	0.8	1.4
SH1754_94	93.6	1.398	0.037	0.0047	0.00657	0.00023	0.015093	36.5	4.6	42.2	1.5	-170	200	42.2	1.5	15.6
SH1754_76	179.3	1.184	0.0488	0.0047	0.00697	0.00023	0.023067	48.1	4.5	44.7	1.5	210	180	44.7	1.5	7.1
SH1754_91	155.3	1.378	0.0514	0.008	0.00699	0.00033	0.1033	50.5	7.6	44.9	2.1	260	290	44.9	2.1	11.1
SH1754_17	214.7	0.816	0.05	0.0041	0.00706	0.0002	0.21812	49.4	3.9	45.3	1.3	230	160	45.3	1.3	8.3
SH1754_108	854	0.79	0.0492	0.002	0.00753	0.00011	0.2236	48.7	2	48.36	0.73	80	81	48.4	0.7	0.7
SH1754_103	245.9	1.353	0.0549	0.0056	0.00766	0.00025	0.054261	54.1	5.4	49.2	1.6	230	200	49.2	1.6	9.1
SH1754_118	88.6	1.149	0.062	0.011	0.0078	0.00049	0.25342	60	10	50.1	3.1	340	310	50.1	3.1	16.5
SH1754_86	1141	1.559	0.0551	0.003	0.00837	0.00018	0.27678	54.4	2.9	53.7	1.2	130	110	53.7	1.2	1.3
SH1754_87	187	1.33	0.0522	0.0056	0.00841	0.0003	0.045236	51.4	5.4	54	1.9	-10	190	54.0	1.9	5.1
SH1754_85	337	1.522	0.0592	0.0032	0.00849	0.00018	0.070007	58.2	3	54.5	1.1	250	110	54.5	1.1	6.4
SH175																

SH1754_70	398	1.96	0.564	0.011	0.07218	0.00083	0.25862	453.3	7.4	449.2	5	449	45	449.2	5.0	0.9
SH1754_40	218.2	3.7	0.579	0.014	0.07219	0.00076	0.03964	462.6	9.2	449.3	4.6	517	58	449.3	4.6	2.9
SH1754_101	829	2.17	0.562	0.01	0.0724	0.00074	0.39916	452.4	6.5	450.6	4.4	471	34	450.6	4.4	0.4
SH1754_16	194	1.415	0.645	0.02	0.0805	0.0014	0.22136	504	13	498.9	8.1	534	65	498.9	8.1	1.0
SH1754_100	1048	1.236	0.6403	0.0067	0.08108	0.00064	0.24774	502.2	4.2	502.5	3.8	500	25	502.5	3.8	0.1
SH1754_67	274.2	0.773	0.669	0.014	0.08113	0.00089	0.3349	519.1	8.7	502.8	5.3	568	47	502.8	5.3	3.1
SH1754_30	339	1.107	0.703	0.013	0.08683	0.00077	0.31857	539.4	7.5	536.7	4.6	545	39	536.7	4.6	0.5
SH1754_97	417	1.542	0.708	0.045	0.0876	0.0034	0.67453	541	26	541	20	540	91	541.0	20.0	0.0
SH1754_5	258.7	5.86	0.746	0.012	0.09063	0.00075	0.31273	565.2	7.1	559.2	4.4	591	34	559.2	4.4	1.1
SH1754_25	182	3.49	0.769	0.016	0.09315	0.00087	0.21509	577.5	9.2	574	5.1	581	46	574.0	5.1	0.6
SH1754_19	1279	96	0.808	0.017	0.0968	0.0031	0.29237	601.3	9.7	595	18	631	95	595.0	18.0	1.0
SH1754_63	198.5	3.74	0.822	0.04	0.0979	0.0031	0.78472	606	22	601	18	596	66	601.0	18.0	0.8
SH1754_110	248	2.76	0.862	0.016	0.1036	0.0011	0.29491	630.9	9.1	635.1	6.5	599	42	635.1	6.5	0.7
SH1754_53	711	4.8	0.887	0.013	0.1044	0.0012	0.34539	644.2	7.1	640.2	6.7	661	33	640.2	6.7	0.6
SH1754_98	597	23.7	0.917	0.023	0.1054	0.0013	0.11136	660	12	645.7	7.3	713	57	645.7	7.3	2.2
SH1754_1	96.8	3.32	0.912	0.024	0.1064	0.0014	0.14522	655	13	651.9	8.1	656	62	651.9	8.1	0.5
SH1754_33	250.5	0.741	0.916	0.02	0.1071	0.0012	0.0096662	659	10	655.6	6.7	676	54	655.6	6.7	0.5
SH1754_102	308	1.18	0.906	0.021	0.1077	0.0018	0.43124	656	12	659	10	644	50	659.0	10.0	0.5
SH1754_4	757	11.2	0.993	0.023	0.1084	0.0019	0.5137	699	12	663	11	816	46	663.0	11.0	5.2
SH1754_55	152	1.38	1.007	0.05	0.1129	0.0035	0.010516	705	25	689	20	750	120	689.0	20.0	2.3
SH1754_114	500	1.476	1.184	0.031	0.1311	0.0022	0.62039	791	14	794	13	809	42	794.0	13.0	0.4
SH1754_96	38.08	2.67	1.287	0.06	0.1354	0.0031	0.1577	835	27	818	18	860	110	818.0	18.0	2.0
SH1754_90	341	1.089	1.299	0.029	0.1406	0.0018	0.41465	844	13	848	10	840	43	848.0	10.0	0.5

SH1754_116	42.53	1.93	1.554	0.074	0.1484	0.0038	0.22495	946	29	892	21	1057	98	892.0	21.0	5.7
SH1754_17	306	1.331	1.418	0.021	0.1492	0.0013	0.23544	895.4	8.8	896.5	7.1	891	31	896.5	7.1	0.1
SH1754_84	392	3.59	1.493	0.018	0.1539	0.0012	0.38459	927.4	7	922.9	6.9	942	23	922.9	6.9	0.5
SH1754_68	75.2	1.296	1.539	0.053	0.157	0.0027	0.26661	946	20	940	15	938	66	940.0	15.0	0.6
SH1754_113	168.6	4.3	1.566	0.034	0.1604	0.0026	0.42781	955	13	958	15	940	43	940.0	15.0	0.3
SH1754_62	100.2	1.173	1.633	0.036	0.1646	0.0023	0.36795	980	14	982	13	964	42	964.0	42.0	1.9
SH1754_42	229	1.248	1.643	0.027	0.1666	0.0015	0.27757	985	10	993.3	8.4	980	33	980.0	33.0	1.4
SH1754_56	287	0.721	1.639	0.034	0.1632	0.0016	0.45057	988	13	974.6	8.8	1019	39	1019.0	39.0	4.4
SH1754_24	561	1.991	1.644	0.026	0.1607	0.0017	0.61276	986	10	960.6	9.6	1042	25	1042.0	25.0	7.8
SH1754_21	112.7	1.215	1.954	0.051	0.1858	0.0029	0.1727	1097	18	1098	16	1086	58	1086.0	58.0	1.1
SH1754_115	63.8	1.078	3.302	0.099	0.2383	0.0043	0.24847	1477	23	1377	22	1618	57	1618.0	57.0	14.9
SH1754_27	850	4.91	3.27	0.11	0.2236	0.0059	0.87607	1467	27	1299	31	1723	32	1723.0	32.0	24.6
SH1754_111	910	32.4	5.121	0.055	0.3295	0.004	0.61827	1839	9.1	1836	20	1843	18	1843.0	18.0	0.4
SH1754_75	273.5	5.22	5.39	0.11	0.3396	0.0058	0.56306	1882	17	1884	28	1874	32	1874.0	32.0	0.5
SH1754_59	618	21.6	5.354	0.073	0.3288	0.0027	0.34697	1876	11	1832	13	1911	21	1911.0	21.0	4.1
SH1754_82	53	2.22	6.09	0.11	0.3655	0.005	0.32761	1986	16	2007	24	1967	33	1967.0	33.0	2.0
SH1754_43	797	30.5	4.868	0.062	0.2778	0.0029	0.64453	1796	11	1580	15	2059	18	2059.0	18.0	23.3
SH1754_74	237	0.862	6.92	0.13	0.3566	0.0055	0.38442	2100	16	1966	26	2230	31	2230.0	31.0	11.8
SH1754_105	68	2.81	5.53	0.17	0.2803	0.0077	0.50404	1902	27	1592	39	2261	48	2261.0	48.0	29.6
SH1754_51	286	1.597	9.202	0.098	0.456	0.0043	0.79361	2356.5	9.8	2421	19	2303	14	2303.0	14.0	5.1
SH1754_46	342	0.6915	8.8	0.12	0.4282	0.0057	0.73681	2316	13	2297	26	2339	17	2339.0	17.0	1.8
SH1754_6	211.9	3.29	9.25	0.13	0.4378	0.0067	0.3775	2362	13	2340	30	2377	29	2377.0	29.0	1.6
SH1754_61	287	5.88	9.81	0.25	0.4412	0.0074	0.85822	2405	26	2353	33	2444	28	2444.0	28.0	3.7
SH1754_104	141	4.3	11.36	0.71	0.478	0.018	0.97434	2508	66	2506	78	2516	63	2516.0	63.0	0.4
SH1754_7	29.1	4.2	9.2	0.26	0.3903	0.0081	0.55871	2353	26	2123	38	2549	43	2549.0	43.0	16.7
SH1754_29	120.4	1.421	11.76	0.26	0.4867	0.0085	0.24791	2583	20	2555	37	2607	33	2607.0	33.0	2.0
SH1754_64	440	1.699	12.79	0.1	0.5093	0.0041	0.59544	2665	7	2653	18	2663	12	2663.0	12.0	0.4
SH1754_35	100.6	7.1	19.95	0.32	0.615	0.01	0.55477	3091	14	3090	41	3087	25	3087.0	25.0	0.1

Grain #	[U] ppm	UT/	207/235	2σ error	206/238	2σ error	RHO	Age Ma	2σ error	Age (Ma)	2σ error	Age (Ma)	2σ error	(Ma)	2σ error	Best age	
																% Disc.	
MT1755_3	1068	1.413	0.0309	0.0038	0.0043	0.00012	0.2613	30.8	3.7	27.65	0.76	260	230	27.7	0.8	10.2	
MT1755_45	319	0.615	0.0375	0.0023	0.00576	0.00011	0.013326	37.3	2.3	37	0.68	100	120	37.0	0.7	0.8	
MT1755_90	176.9	0.867	0.0441	0.0045	0.00592	0.00023	0.040999	43.6	4.4	38	1.5	280	190	38.0	1.5	12.8	
MT1755_48	246	0.679	0.0474	0.0034	0.00611	0.00015	0.15263	46.9	3.3	39.28	0.93	390	140	39.3	0.9	16.2	
MT1755_19	462	0.702	0.043	0.0029	0.00618	0.00014	0.46302	42.6	2.8	39.74	0.89	180	120	39.7	0.9	6.7	
MT1755_27	111.8	1.088	0.0499	0.0061	0.00624	0.00018	0.25793	47.4	4.9	40.1	1.2	310	180	40.1	1.2	15.4	
MT1755_38	228.1	0.815	0.0405	0.003	0.00632	0.00017	0.079143	40.2	3	40.6	1.1	30	130	40.6	1.1	1.0	
MT1755_10	290	0.801	0.0454	0.004	0.00633	0.00018	0.1622	44.9	3.9	40.7	1.1	270	180	40.7	1.1	9.4	
MT1755_13	738	0.817	0.042	0.003	0.006423	0.000099	0.17648	41.6	3	41.27	0.63	115	75	41.3	0.6	0.8	
MT1755_62	451	0.4896	0.0465	0.0026	0.0065	0.0014	0.12555	46.1	2.5	41.75	0.92	300	110	41.8	0.9	9.4	
MT1755_23	153.2	1.061	0.0428	0.0034	0.00652	0.00017	0.064872	42.4	3.3	41.9	1.1	80	140	41.9	1.1	1.2	
MT1755_64	193.7	0.812	0.05	0.0033	0.00664	0.00014	0.16258	49.4	3.2	42.63	0.89	330	130	42.6	0.9	13.7	
MT1755_34	212.1	0.845	0.0471	0.0054	0.00678	0.00025	0.054879	47.7	5.6	43.6	1.6	210	220	43.6	1.6	8.6	
MT1755_26	514.6	0.935	0.0531	0.0036	0.00681	0.00016	0.024441	52.4	3.5	43.8	1.1	420	150	43.8	1.1	16.4	
MT1755_99	545	1.272	0.0488	0.0032	0.00698	0.00012	0.18848	48.3	3.1	44.81	0.78	200	130	44.8	0.8	7.2	
MT1755_61	390	0.8237	0.0465	0.0024	0.007	0.000119	0.0094394	46	2.3	44.94	0.73	110	95	44.9	0.7	2.3	
MT1755_76	303	0.594	0.0507	0.004	0.00706	0.00018	0.077694	50.1	3.9	45.3	1.1	300	170	45.3	1.1	9.6	
MT1755_58	222	0.701	0.0533	0.0042	0.00712	0.00018	0.042063	52.5	4.1	45.8	1.2	330	150	45.8	1.2	12.8	
MT1755_85	246	1.094	0.0549	0.0067	0.00759	0.00045	0.11857	54.1	6.4	48.8	2.9	270	270	48.8	2.9	9.8	
MT1755_103	1174	0.819	0.0531	0.0012	0.008092	0.00008	0.033838	52.6	1.2	51.95	0.51	90	48	52.0	0.5	1.2	
MT1755_77	417	0.717	0.055	0.0026	0.00834	0.00014	0.040316	54.2	2.5	53.51	0.91	105	96	53.5	0.9	1.3	
MT1755_73	487	1.042	0.0558	0.003	0.0084	0.0017	0.16817	55	2.8	53.9	1.1	100	100	53.9	1.1	2.0	
MT1755_67	507	0.832	0.0603	0.0023	0.00857	0.00011	0.02387	59.4	2.2	55	0.68	223	80	55.0	0.7	7.4	
MT1755_56	237	0.549	0.0604	0.0035	0.00882	0.00019	0.10346	59.8	3.5	56.6	1.2	180	120	56.6	1.2	5.4	
MT1755_110	1430	0.768	0.061	0.0023	0.00883	0.00011	0.25713	60.1	2.2	56.69	0.72	216	75	56.7	0.7	5.7	
MT1755_9	284.8	0.861	0.0586	0.0032	0.00884	0.00016	0.12974	57.6	3.1	56.7	1	100	100	56.7	1.0	1.6	
MT1755_47	385	0.781	0.0679	0.004	0.00898	0.00016	0.050086	66.6	3.8	57.6	1	370	130	57.6	1.0	13.5	
MT1755_66	412.9	1.02	0.0615	0.0023	0.00899	0.00014	0.059596	60.5	2.2	57.66	0.87	184	78	57.7	0.9	4.7	
MT1755_65	237	5.68	0.0958	0.0042	0.0024	0.00016	0.23537	66	3.1	60.72	0.99	254	95	60.7	1.0	8.0	
MT1755_106	118.2	0.781	0.0684	0.0067	0.01079	0.00026	0.022687	67.8	6.6	69.2	1.6	20	170	69.2	1.6	2.1	
MT1755_120	146.6	0.807	0.0758	0.0049	0.0109	0.00022	0.050671	73.8	4.6	69.9	1.4	170	120	69.9	1.4	5.3	
MT1755_95	85.2	1.172	0.0733	0.0057	0.0116	0.00031	0.039848	71.3	5.4	74.4	2	30	140	74.4	2.0	4.3	
MT1755_104	103.1	0.785	0.0809	0.0065	0.01228	0.00038											

MT1755_6	136.7	1.78	1.16	0.023	0.1278	0.0011	0.12447	780	11	775.1	6.4	793	44	775.1	6.4	0.6
MT1755_21	257	1.006	1.193	0.025	0.1307	0.0019	0.77532	795	12	793	11	814	30	793.0	11.0	0.3
MT1755_119	968	2.309	1.199	0.011	0.13227	0.00081	0.38698	799.9	5.3	800.7	4.6	792	20	800.7	4.6	0.1
MT1755_57	291.3	1.2	1.239	0.03	0.1355	0.0016	0.007512	818	13	818.9	9.2	802	59	818.9	9.2	0.1
MT1755_83	380.2	1.141	1.357	0.032	0.1394	0.0021	0.33928	870	14	841	12	934	48	841.0	12.0	3.3
MT1755_44	602	0.83	1.386	0.021	0.14	0.0011	0.34326	882.5	9	844.5	6.1	979	30	844.5	6.1	4.3
MT1755_72	544	2.47	1.464	0.053	0.1407	0.0057	0.93556	906	23	845	33	1086	28	845.0	33.0	6.7
MT1755_31	120	0.963	1.332	0.024	0.1411	0.0017	0.34605	861	11	852.1	9.5	877	40	852.1	9.5	1.0
MT1755_2	791	3.61	1.358	0.047	0.1434	0.0042	0.96596	862	22	862	24	874	23	862.0	24.0	0.0
MT1755_39	278	1.76	1.356	0.027	0.1442	0.0026	0.73458	868	12	868	15	867	29	868.0	15.0	0.0
MT1755_86	458	1.376	1.678	0.024	0.1705	0.0021	0.63037	999.2	9.1	1015	11	969	26	969.0	26.0	4.7
MT1755_102	257	1.363	1.625	0.023	0.1638	0.0015	0.58542	978.5	8.6	977.7	8.3	974	23	974.0	23.0	0.4
MT1755_37	253	1.567	1.652	0.019	0.1646	0.0013	0.31491	990.3	7.5	982.1	7.1	1002	24	1002.0	24.0	2.0
MT1755_117	156.3	0.6373	2.002	0.034	0.1934	0.0019	0.42619	1116	12	1139	10	1069	32	1069.0	32.0	6.5
MT1755_8	254	3.424	2.267	0.031	0.2042	0.0019	0.82288	1200.8	9.8	1197	10	1210	22	1210.0	22.0	1.1
MT1755_115	233.3	2.24	2.572	0.044	0.2109	0.0022	0.22367	1291	12	1234	12	1388	34	1388.0	34.0	11.1
MT1755_43	319	3.5	4.567	0.057	0.3162	0.0029	0.81696	1741	11	1771	14	1713	13	1713.0	13.0	3.4
MT1755_107	299.6	1.378	3.504	0.033	0.2358	0.0017	0.44137	1527.3	7.5	1364.8	8.9	1759	16	1759.0	16.0	22.4
MT1755_36	546	3.09	5.426	0.037	0.3478	0.002	0.52857	1888.3	5.8	1923.8	9.6	1842	12	1842.0	12.0	4.4
MT1755_108	934	3.44	5.53	0.11	0.346	0.011	0.37364	1913	24	1917	52	1897	27	1897.0	27.0	1.1
MT1755_101	115.1	1.165	5.53	0.11	0.335	0.0047	0.72832	1903	17	1862	23	1950	24	1950.0	24.0	4.5
MT1755_71	325.5	4.07	6.504	0.078	0.3832	0.0048	0.86241	2046	11	2096	21	1995	12	1995.0	12.0	5.1
MT1755_97	218.9	0.916	6.008	0.057	0.3536	0.0031	0.66895	1976.2	8.3	1951	15	2005	13	2005.0	13.0	2.7
MT1755_75	276.7	3.033	7.748	0.084	0.4438	0.0043	0.81915	2200.3	9.7	2366	19	2045	13	2045.0	13.0	15.7
MT1755_96	236.4	1.488	6.3	0.12	0.3587	0.0056	0.75123	2017	16	1976	27	2059	21	2059.0	21.0	4.0
MT1755_55	113.8	1.381	7.713	0.082	0.4114	0.0029	0.28891	2196.7	9.5	2221	13	2177	18	2177.0	18.0	2.0
MT1755_53	558	1.621	6.76	0.21	0.3341	0.0092	0.95152	2074	28	1856	45	2304	17	2304.0	17.0	19.4
MT1755_111	594	1.94	9.5	0.67	0.393	0.025	0.98797	2210	120	2090	120	2408	82	2408.0	82.0	13.2
MT1755_49	504	0.77	10.96	0.12	0.4739	0.0051	0.93636	2516	11	2499	23	2528	10	2528.0	10.0	1.1
MT1755_118	241.3	2.17	11.098	0.076	0.4665	0.0033	0.65564	2530.6	6.4	2467	15	2577	11	2577.0	11.0	4.3
MT1755_4	154.8	0.642	11.13	0.11	0.4633	0.0044	0.86787	2532.7	9.3	2453	19	2602	11	2602.0	11.0	5.7
MT1755_32	61.8	0.558	12.53	0.16	0.5203	0.006	0.67817	2642	12	2701	25	2603	16	2603.0	16.0	3.8
MT1755_24	108.9	0.7	11.88	0.18	0.4844	0.0067	0.96459	2590	17	2544	30	2631	15	2631.0	15.0	3.3