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Data Repository

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DR4: Supplementary Table S1: U-Th composition and U-Pb isotopic composition for detrital zircon from the Falknis Breccia Fm. samples analyzed by LA-ICPMS (CR-T-03H).

COMPOSITION OF THE CONCRETIONS FROM THE TONSCHIEFER FORMATION

Chemical analyses were run on the bulk-rock of concretions at SARM-Laboratory (CNRS-Nancy, France) on ICP-OES Thermo FischerVR iCap6500 for major elements and Sc, and on ICP-MS iCapQ for trace elements. Precision and accuracy of the method are routinely controlled by international rock standards. The achieving precisions for major elements are between <2% and <5% for the concentrations between >2% and 0.1%. For trace elements precisions are <2% for concentrations >100 ppm, <5% for concentrations <100 ppm, and the detection limits are from 1 to 0.1 ppm.

REE and Y are normalized to the Upper Continental Crust values (McLennan, 2001) and anomalies are calculated as $\text{Ce/Ce}^* = \text{Ce}_n / (\text{La}_n^{0.5} * \text{Pr}_n^{0.5})$ and $\text{Eu/Eu}^* = \text{Eu}_n / (\text{Sm}_n + \text{Gd}_n)$.

The concretions are in two types, phosphatic-siliceous or siliceous (Table 1). The phosphatic nodules are rich in silica and their P_2O_5 content corresponds to 36–30% of apatite. SEM-EDS analyses on thin sections established occurrences of silica grains and detrital silicates (albite, micas), radiolarians, few barite crystals, pyrite and chalcopyrite, and rare zircons. Siliceous nodules are radiolarian rich.

Such mineral paragenesis, besides the diagenetic phases (apatite, pyrite), confirm the major sources for the sedimentary environment of nodules as detrital (e.g., silicates, zircon) and marine biogenic (e.g., radiolarians and related barite).

The phosphatic concretions are REE-Y enriched, particularly in MREEs (Fig. 1A) and record a slight positive Ce anomaly due to their formation by early diagenesis from decomposition of organic matter in shale-type deposits (Kolodny, 1981; Dabard and Loi, 2012 and references therein).

A significant trend in the nodule compositions is given by some trace elements behavior. The positive Eu anomaly in the lowest sample (the most phosphatic one) could reflect a more reducing condition in the sediment layer near the interface with the bedrock. The higher U concentration in two lowermost samples relates an earlier stage of diagenesis. The low La_n/Sm_n (0.2–0.1 upward) ratio does not relate a global marine anoxia, but a gradual adsorption of REEs, with mostly a seawater signature.

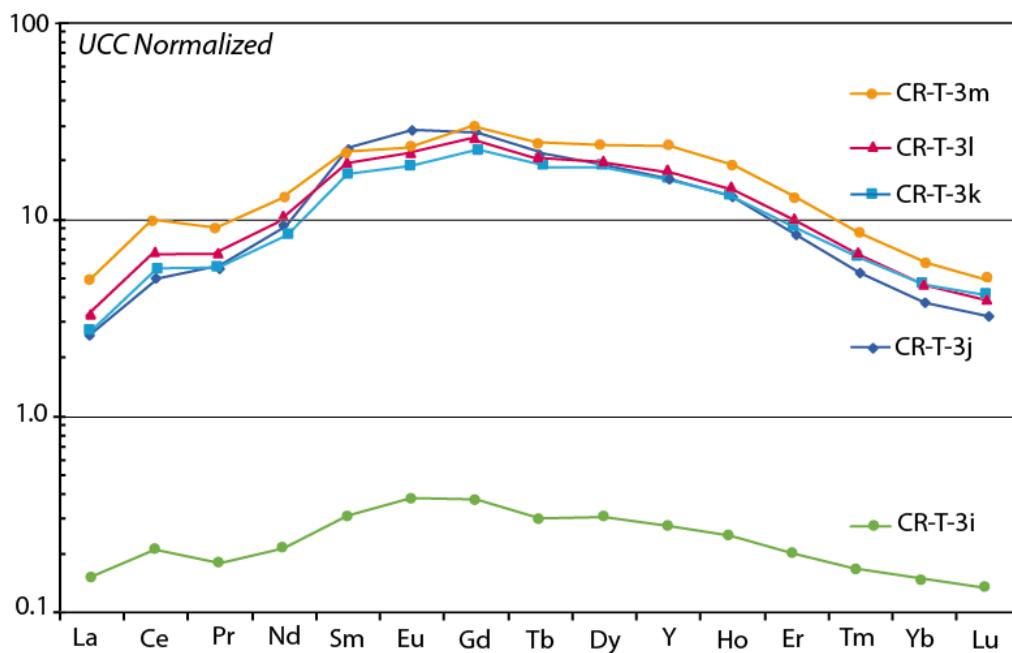


Figure 1. A. REE-Y pattern of the phosphatic and siliceous (CR-T3i) concretions of the Tonschiefer Fm.

FORMATION OF PHOSPHATE ENRICHMENTS IN MARINE SEDIMENTS

In present-day oceanic basins, phosphorites generally form by early diagenetic evolution of organic matter-enriched sediments and by replacement of carbonates (Froelich et al., 1982). Apart very shallow environments with a fresh water contribution, phosphorites occur on areas of water upwellings on shelves and slopes (Kolodny, 1981 and references therein), on plateaus, banks and seamounts (Karpoff et al., 1980; Hein et al., 1993 and references therein). In open marine sediments, authigenic apatite could form during burial of primary organic P and Fe-oxides (Delaney, 1998). The P-enriched oxides, with authigenic silica, is also characteristic of past or recent hydrothermal processes (among others, Karpoff, 1992; Wheat et al., 1996). The silica and phosphatic phases paragenesis, forming concretions in old sedimentary sequences is compiled by Kolodny (1981) stating that depth of fossil occurrences could reach 2800 m whereas modern deposits did not exceed 900 m.

The close association of Si and P in concretions is described by Dabard and Loi (2012) in Paleozoic mudstones.

The nodules in the Tonschiefer Fm evolving upwards to more siliceous and oxide-rich layers are formed as classically described from by redox diagenetic process near the water-sediment interface. These reactions, in the suboxic to oxic zone of the sediment, involve the reduction of primary Fe-oxides and organic matter followed by formation of sulphides and the adsorption of released REEs in phosphate phases. The high biogenic silica input, effectively expressed by radiolarians remains and the authigenic siliceous nodules, is favored by a productive seawater, such as oxygenated open marine areas. Both biogenic and detrital inputs allowed a sufficient high deposition rate for the formation of such type of concretions in restricted zones of the deep-sea bed.

DR1

Table 1. Whole-rock chemical composition of the nodules from the Tonschiefer Fm. Samples from bottom to top, see section Figure 8.

Sample	CR-T-3m	CR-T-3l	CR-T-3k	CR-T-3j	CR-T-3i
Major elements wt%					
SiO₂	50.66	50.35	47.34	46.63	93.11
Al₂O₃	4.01	4.81	7.29	6.47	1.56
Fe₂O₃	2.11	2.86	3.71	4.56	1.79
MnO	0.025	0.028	0.033	0.026	0.007
MgO	1.05	1.32	1.70	1.89	0.26
CaO	21.41	20.36	19.06	19.62	0.95
Na₂O	0.13	0.11	0.15	0.11	0.02
K₂O	0.97	1.12	1.91	1.39	0.44
TiO₂	0.11	0.13	0.24	0.16	0.06
P₂O₅	15.48	12.77	13.48	13.86	0.14
LOI	2.68	4.65	3.94	4.11	1.44
Total	98.64	98.50	98.85	98.83	99.76
Trace elements ppm					
Sr	618	796	542	604	119
Ba	119	138	223	171	68
Co	30	22	32	34	46
Cr	15	15	28	21	10
Cu	70	98	271	318	17
Ni	39	32	62	63	8
Pb	34	35	33	30	2
V	27	30	45	40	11
Zn	77	75	83	98	19
Rb	37	43	74	54	17
Th	3.4	4.3	5.3	4.9	1.0
U	34.3	35.5	10.1	11.0	0.5
Zr	26	31	55	34	12
Y	480.8	371.8	338.5	331.4	5.8
La	145.3	98.2	83.0	77.3	4.5
Ce	635.5	434.9	366.7	319.6	13.3
Pr	63.8	47.5	40.8	39.9	1.3
Nd	329.4	251.1	219.1	240.8	5.5
Sm	98.7	87.7	78.4	102.6	1.4
Eu	20.3	19.0	16.7	25.1	0.3
Gd	113.4	98.4	87.0	106.6	1.4
Tb	15.7	13.2	12.0	13.7	0.2
Dy	84.1	69.2	62.8	66.1	1.1
Ho	15.1	11.9	10.7	10.4	0.2
Er	30.3	23.5	21.3	19.1	0.5
Tm	2.8	2.3	2.1	1.8	0.1
Yb	13.1	10.6	10.4	8.3	0.3
Lu	1.6	1.3	1.3	1.0	0.0
Sum REE+Y	2049.9	1540.7	1350.7	1363.8	35.9
Ce/Ce*	1.50	1.45	1.44	1.31	1.28
Eu/Eu*	0.89	0.95	0.94	1.12	1.11

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Sample CR-T-02F

Supplementary Table S1: U-Th composition and U-Pb isotopic composition for detrital zircon from the Tonschiefer Fm. samples analyzed by LA-ICPMS

Sample Name: CR-T-02F																		
	Grain #	[U] ppm	U/Th	207/235	2σ error	206/238	2σ error	RHO	Age Ma	error	Age (Ma)	error	Age (Ma)	error	(Ma)	error	ance*	Rim/ Th/U
CR-T-02f_1.FIN2	1200	2.47	0.34510	0.00550	0.04730	0.00053	0.14859	299.7	3.8	297.5	3.2	316	27	297.5	3.2	0.7	Rim	0.41
CR-T-02f_1.FIN2	50.2	3.34	0.50800	0.03000	0.06600	0.00160	0.20454	417.0	20.0	411.7	9.8	400	120	411.7	9.8	1.3	Core	0.30
CR-T-02f_2.FIN2	279.1	57.40	0.42590	0.00760	0.05599	0.00049	0.20511	360.9	5.4	351.4	3.0	412	41	351.4	3.0	2.6		0.02
CR-T-02f_3.FIN2	281.9	3.94	0.59450	0.00820	0.07579	0.00045	0.18378	471.9	4.9	470.9	2.7	464	28	470.9	2.7	0.2		0.25
CR-T-02f_4.FIN2	79.71	1.77	0.34200	0.01300	0.04578	0.00071	0.19702	298.0	10.0	288.8	4.3	359	79	288.8	4.3	3.1		0.56
CR-T-02f_5.FIN2	266	7.09	0.59400	0.01000	0.07574	0.00066	0.09405	471.2	6.2	470.5	4.0	450	32	470.5	4.0	0.1		0.14
CR-T-02f_6.FIN2	242.1	3.04	0.35850	0.00830	0.04859	0.00042	0.03098	308.2	5.8	305.8	2.6	302	43	305.8	2.6	0.8		0.33
CR-T-02f_7.FIN2	82.7	7.17	0.75300	0.01800	0.08970	0.00093	0.07949	573.0	11.0	553.6	5.5	631	55	553.6	5.5	3.4		0.14
CR-T-02f_8.FIN2	219	2.77	0.33720	0.00660	0.04624	0.00039	0.07440	294.5	5.0	291.4	2.4	307	44	291.4	2.4	1.1		0.36
CR-T-02f_9.FIN2	285.2	2.27	0.40000	0.01000	0.04912	0.00083	0.26515	341.7	7.6	309.1	5.1	580	55	DISC	DISC	9.5		0.44
CR-T-02f_10.FIN2	251	3.55	0.58840	0.00960	0.07565	0.00063	0.18610	468.6	5.9	470.0	3.7	461	32	470.0	3.7	0.3		0.28
CR-T-02f_11.FIN2	284	6.42	0.60020	0.00930	0.07639	0.00070	0.19976	474.1	5.6	474.4	4.2	474	29	474.4	4.2	0.1		0.16
CR-T-02f_12.FIN2	153.5	1.35	0.35500	0.01300	0.04745	0.00067	0.29060	308.0	10.0	298.8	4.1	350	77	298.8	4.1	3.0		0.74
CR-T-02f_13.FIN2	313.5	3.02	0.36130	0.00610	0.04946	0.00039	0.22678	313.7	4.4	311.2	2.4	337	37	311.2	2.4	0.8		0.33
CR-T-02f_14.FIN2	559.6	4.23	0.35280	0.00460	0.04838	0.00029	0.10941	306.5	3.3	304.6	1.8	314	28	304.6	1.8	0.6		0.24
CR-T-02f_15.FIN2	124.5	5.44	0.58900	0.01300	0.07505	0.00073	0.09378	468.3	8.1	466.4	4.4	467	46	466.4	4.4	0.4		0.18
CR-T-02f_16.FIN2	841.2	3.51	0.77990	0.00740	0.09483	0.00077	0.40128	586.0	4.1	583.9	4.5	594	21	583.9	4.5	0.4		0.28
CR-T-02f_17.FIN2	155.4	3.22	0.72300	0.01200	0.08949	0.00058	0.18011	550.3	7.2	552.5	3.4	536	37	552.5	3.4	0.4		0.31
CR-T-02f_18.FIN2	369.3	1.93	0.34070	0.00680	0.04602	0.00037	0.05829	296.4	5.0	290.0	2.3	342	41	290.0	2.3	2.2		0.52
CR-T-02f_19.FIN2	154.3	3.31	5.17800	0.07900	0.31210	0.00410	0.63586	1849.0	13.0	1750.0	20.0	1970	21	DISC	DISC	11.2		0.30
CR-T-02f_20.FIN2	357	2.20	0.36090	0.00610	0.04893	0.00038	0.23841	312.4	4.6	307.9	2.3	333	36	307.9	2.3	1.4		0.45
CR-T-02f_21.FIN2	293.5	1.87	0.83500	0.01000	0.10135	0.00050	0.02995	615.1	5.5	622.2	3.0	592	26	622.2	3.0	1.2		0.54
CR-T-02f_22.FIN2	583	1.87	0.34200	0.00660	0.04725	0.00064	0.42196	298.7	4.9	297.8	3.9	319	38	297.8	3.9	0.3		0.53
CR-T-02f_23.FIN2	432.2	1.66	0.33630	0.00470	0.04660	0.00029	0.18604	294.1	3.6	293.6	1.8	285	31	293.6	1.8	0.2		0.60
CR-T-02f_24.FIN2	445.4	0.96	0.34980	0.00510	0.04839	0.00033	0.06220	305.1	3.9	304.6	2.0	286	34	304.6	2.0	0.2		1.04
CR-T-02f_25.FIN2	437	63.90	0.43500	0.04500	0.05143	0.00090	0.12777	359.0	26.0	323.2	5.5	462	99	DISC	DISC	10.0	Rim	0.02
CR-T-02f_25.FIN2	160.7	3.56	7.17000	0.22000	0.39230	0.00530	0.51748	2132.0	27.0	2133.0	24.0	2143	43	2143.0	43.0	0.5	Core	0.28
CR-T-02f_26.FIN2	206.3	8.51	0.72150	0.00990	0.08901	0.00054	0.12851	550.1	5.8	549.8	3.2	546	29	549.8	3.2	0.1		0.12
CR-T-02f_27.FIN2	313.5	2.04	0.34710	0.00750	0.04750	0.00049	0.26051	303.0	5.5	299.1	3.0	322	47	299.1	3.0	1.3		0.49
CR-T-02f_28.FIN2	642	3.37	0.36120	0.00430	0.04988	0.00031	0.30455	313.6	3.2	313.7	1.9	303	27	313.7	1.9	0.0		0.30
CR-T-02f_29.FIN2	743	2.17	0.34080	0.00440	0.04694	0.00038	0.43200	297.7	3.4	295.7	2.3	329	26	295.7	2.3	0.7		0.46
CR-T-02f_30.FIN2	183.1	0.53	1.64700	0.02400	0.16540	0.00180	0.58065	987.7	9.1	987.0	10.0	996	25	996.0	25.0	0.9		1.89
CR-T-02f_31.FIN2	127.7	2.27	0.59500	0.01200	0.07622	0.00062	0.18104	473.4	7.7	473.5	3.7	452	46	473.5	3.7	0.0		0.44
CR-T-02f_32.FIN2	266	2.49	0.36520	0.00810	0.04997	0.00047	0.15171	314.9	5.9	314.3	2.9	309	44	314.3	2.9	0.2		0.40
CR-T-02f_33.FIN2	193.6	1.49	0.58800	0.01100	0.07255	0.00053	0.11286	467.4	7.1	451.5	3.2	522	40	451.5	3.2	3.4		0.67
CR-T-02f_34.FIN2	272.4	3.27	0.42500	0.01100	0.05701	0.00073	0.18036	359.9	7.8	357.4	4.4	389	57	357.4	4.4	0.7		0.31
CR-T-02f_35.FIN2	352	1.65	0.83950	0.00880	0.10098	0.00062	0.25131	617.4	4.8	620.2	3.7	610	21	620.2	3.7	0.5		0.61

Sample CR-T-02F

CR-T-02f_36.FIN2	124.4	5.13	0.61600	0.01400	0.07801	0.00075	0.01346	483.8	8.5	484.1	4.5	466	50	484.1	4.5	0.1	0.19
CR-T-02f_37.FIN2	118.71	3.69	0.35100	0.01100	0.04863	0.00050	0.13632	305.6	8.1	306.1	3.1	289	63	306.1	3.1	0.2	0.27
CR-T-02f_38.FIN2	496	5.15	0.61000	0.02700	0.07510	0.00260	0.12294	481.0	16.0	466.0	15.0	519	70	466.0	15.0	3.1	Rim 0.19
CR-T-02f_38.FIN2	43.22	0.60	1.92500	0.04500	0.18400	0.00240	0.37840	1087.0	15.0	1089.0	13.0	1080	41	1080.0	41.0	0.8	Core 1.66
CR-T-02f_39.FIN2	602	3.21	0.34900	0.00550	0.04812	0.00048	0.39727	303.2	4.2	302.9	2.9	323	32	302.9	2.9	0.1	0.31
CR-T-02f_40.FIN2	115.7	7.90	0.70900	0.01600	0.08760	0.00084	0.00296	537.5	7.9	541.1	5.0	494	40	541.1	5.0	0.7	0.13
CR-T-02f_41.FIN2	82.6	1.04	0.96000	0.02800	0.10720	0.00150	0.08576	680.0	14.0	657.2	8.7	757	63	657.2	8.7	3.4	0.97
CR-T-02f_42.FIN2	135.2	1.89	0.34660	0.00940	0.04610	0.00043	0.01170	302.0	7.1	290.5	2.7	384	60	290.5	2.7	3.8	0.53
CR-T-02f_43.FIN2	266.3	12.39	0.59100	0.00830	0.07534	0.00061	0.36816	470.9	5.4	468.2	3.7	471	31	468.2	3.7	0.6	0.08
CR-T-02f_44.FIN2	450.9	2.73	0.40570	0.00550	0.05502	0.00040	0.14383	345.4	3.9	345.2	2.4	348	30	345.2	2.4	0.1	0.37
CR-T-02f_45.FIN2	423.1	1.16	3.15200	0.03400	0.21270	0.00200	0.56053	1445.2	8.2	1243.0	10.0	1759	18	DISC	DISC	29.3	0.86
CR-T-02f_46.FIN2	178	2.03	0.36200	0.01100	0.04785	0.00066	0.17060	313.6	7.8	301.3	4.1	394	68	301.3	4.1	3.9	0.49
CR-T-02f_47.FIN2	168.1	3.35	0.59100	0.01800	0.07370	0.00100	0.26902	470.0	12.0	458.2	6.2	515	66	458.2	6.2	2.5	0.30
CR-T-02f_48.FIN2	135.2	2.60	0.86500	0.01600	0.10370	0.00120	0.01042	627.2	8.1	636.0	7.0	580	36	636.0	7.0	1.4	0.38
CR-T-02f_49.FIN2	490	8.05	0.59490	0.00930	0.07578	0.00049	0.03940	471.5	5.1	470.8	3.0	464	26	470.8	3.0	0.1	0.12
CR-T-02f_50.FIN2	286.5	5.91	0.70820	0.00880	0.08839	0.00062	0.18409	543.1	5.2	545.9	3.7	526	28	545.9	3.7	0.5	0.17
CR-T-02f_51.FIN2	361.1	2.70	0.59390	0.00660	0.07656	0.00046	0.24436	473.3	4.1	475.5	2.7	462	22	475.5	2.7	0.5	0.37
CR-T-02f_52.FIN2	1283	126.00	0.57530	0.00780	0.07488	0.00071	0.51101	461.0	5.0	465.4	4.3	449	24	465.4	4.3	1.0	0.01
CR-T-02f_53.FIN2	485	0.66	0.80240	0.00870	0.09606	0.00062	0.27087	598.4	4.8	591.4	3.7	632	22	591.4	3.7	1.2	1.52
CR-T-02f_54.FIN2	63.56	8.87	1.16300	0.02800	0.13050	0.00160	0.05940	777.0	13.0	790.0	9.3	728	46	790.0	9.3	1.7	0.11
CR-T-02f_55.FIN2	885	4.13	0.54800	0.01700	0.06831	0.00087	0.24339	443.0	10.0	425.9	5.2	514	44	425.9	5.2	3.9	Rim 0.24
CR-T-02f_55.FIN2	428	1.24	0.72100	0.01200	0.08904	0.00091	0.47428	550.7	6.7	549.7	5.4	547	30	549.7	5.4	0.2	Core 0.81
CR-T-02f_56.FIN2	510	58.00	0.40900	0.01100	0.05243	0.00069	0.00809	347.0	8.1	329.4	4.2	465	56	DISC	DISC	5.1	0.02
CR-T-02f_57.FIN2	496	3.42	0.73600	0.01100	0.08756	0.00062	0.25371	559.8	6.6	541.0	3.7	653	34	541.0	3.7	3.4	0.29
CR-T-02f_58.FIN2	44.8	1.56	5.94000	0.18000	0.35100	0.01100	0.62145	1963.0	26.0	1937.0	54.0	2021	47	2021.0	47.0	4.2	0.64
CR-T-02f_59.FIN2	353	12.53	0.63500	0.01900	0.07589	0.00069	0.03205	495.0	10.0	471.8	4.1	557	46	471.8	4.1	4.7	Rim 0.08
CR-T-02f_59.FIN2	246.2	1.10	1.03300	0.01900	0.11870	0.00200	0.47041	720.4	9.4	724.0	11.0	740	40	724.0	11.0	0.5	Core 0.91
CR-T-02f_60.FIN2	151.5	1.22	0.89100	0.02500	0.10440	0.00120	0.04608	648.0	13.0	640.2	7.2	650	64	640.2	7.2	1.2	0.82
CR-T-02f_61.FIN2	511.5	20.00	1.27200	0.01500	0.13910	0.00120	0.29054	832.9	6.9	839.5	6.9	808	26	839.5	6.9	0.8	0.05
CR-T-02f_62.FIN2	273	1.79	0.36640	0.00740	0.04979	0.00039	0.09505	312.5	5.0	313.2	2.4	305	37	313.2	2.4	0.2	0.56
CR-T-02f_63.FIN2	191.3	5.97	0.68500	0.01600	0.08230	0.00093	0.24823	527.0	9.6	509.7	5.5	587	51	509.7	5.5	3.3	0.17
CR-T-02f_64.FIN2	675.8	2.18	0.32280	0.00370	0.04488	0.00029	0.22820	284.3	2.9	283.0	1.8	294	27	283.0	1.8	0.5	0.46
CR-T-02f_65.FIN2	87.28	1.69	1.69800	0.03900	0.16380	0.00230	0.16656	1007.0	15.0	977.0	13.0	1074	55	1074.0	55.0	9.0	0.59
CR-T-02f_66.FIN2	96.7	2.17	0.42300	0.07200	0.04310	0.00370	0.02362	328.0	31.0	263.0	14.0	710	210	DISC	DISC	19.8	0.46
CR-T-02f_67.FIN2	73.3	1.67	0.82400	0.03600	0.09450	0.00180	0.03212	605.0	20.0	583.0	10.0	654	97	583.0	10.0	3.6	0.60
CR-T-02f_68.FIN2	325.7	1.69	0.33500	0.00580	0.04614	0.00031	0.06794	291.9	4.3	290.7	1.9	287	36	290.7	1.9	0.4	0.59
CR-T-02f_69.FIN2	309	2.69	0.54830	0.00830	0.07154	0.00079	0.44462	443.3	5.4	445.3	4.7	464	30	445.3	4.7	0.5	0.37
CR-T-02f_70.FIN2	121.5	1.59	0.36000	0.02000	0.04713	0.00053	0.05548	301.4	9.6	296.8	3.3	305	73	296.8	3.3	1.5	0.63
CR-T-02f_71.FIN2	313.7	8.01	0.59000	0.01000	0.07535	0.00060	0.11575	469.5	6.4	468.3	3.6	474	36	468.3	3.6	0.3	0.12
CR-T-02f_72.FIN2	174.5	1.72	0.31690	0.00980	0.04387	0.00052	0.12071	278.3	7.5	276.7	3.2	292	67	276.7	3.2	0.6	0.58
CR-T-02f_73.FIN2	231.1	1.89	0.33160	0.00820	0.04683	0.00043	0.09713	290.3	6.1	295.0	2.7	260	57	295.0	2.7	1.6	0.53

Sample CR-T-02F

CR-T-02f_74.FIN2	160.3	2.87	0.36400	0.01100	0.04930	0.00058	0.04456	312.5	7.7	310.2	3.6	313	57	310.2	3.6	0.7	0.35
CR-T-02f_75.FIN2	396	2.75	0.32500	0.00790	0.04491	0.00064	0.09658	285.0	6.0	283.1	3.9	297	49	283.1	3.9	0.7	0.36
CR-T-02f_76.FIN2	174.5	2.05	0.35480	0.00860	0.04868	0.00056	0.16750	306.6	6.4	306.3	3.5	282	49	306.3	3.5	0.1	0.49
CR-T-02f_77.FIN2	772	4.59	0.58000	0.02000	0.07440	0.00280	0.67118	464.0	13.0	462.0	17.0	488	55	462.0	17.0	0.4	Rim 0.22
CR-T-02f_77.FIN2	537.7	1.34	0.76100	0.01300	0.09080	0.00120	0.43927	573.7	7.5	560.4	6.8	612	34	560.4	6.8	2.3	Core 0.75
CR-T-02f_78.FIN2	614	7.80	0.60520	0.00880	0.07799	0.00070	0.28472	480.9	5.6	484.1	4.2	482	30	484.1	4.2	0.7	0.13
CR-T-02f_79.FIN2	201.7	5.03	0.76500	0.02600	0.09140	0.00220	0.12252	575.0	15.0	564.0	13.0	610	88	564.0	13.0	1.9	0.20
CR-T-02f_80.FIN2	191.9	2.71	0.60100	0.01300	0.07842	0.00075	0.20228	477.2	8.5	486.6	4.5	428	50	486.6	4.5	2.0	0.37
CR-T-02f_81.FIN2	90.1	1.62	0.34200	0.01100	0.04699	0.00059	0.18160	294.7	8.6	296.1	3.6	276	65	296.1	3.6	0.5	0.62
CR-T-02f_82.FIN2	138.2	1.12	6.18300	0.08500	0.35080	0.00390	0.51815	2001.0	12.0	1937.0	19.0	2067	20	2067.0	20.0	6.3	0.89
CR-T-02f_83.FIN2	851	136.00	0.38900	0.02600	0.05140	0.00150	0.34755	332.0	19.0	323.3	9.0	340	110	323.3	9.0	2.6	Rim 0.01
CR-T-02f_83.FIN2	277	6.90	0.94700	0.01200	0.11090	0.00100	0.33576	676.2	6.5	677.9	6.1	675	26	677.9	6.1	0.3	Core 0.14
CR-T-02f_84.FIN2	165.8	14.80	1.07000	0.11000	0.10750	0.00270	0.31957	726.0	46.0	658.0	16.0	980	180	DISC	DISC	9.4	0.07
CR-T-02f_85.FIN2	337	5.34	0.34330	0.00600	0.04696	0.00040	0.18155	299.4	4.5	295.8	2.5	313	39	295.8	2.5	1.2	0.19
CR-T-02f_86.FIN2	274.4	3.70	0.84300	0.01200	0.09850	0.00120	0.50568	620.5	6.7	605.6	7.0	665	28	605.6	7.0	2.4	0.27
CR-T-02f_87.FIN2	210.3	1.25	0.42500	0.01500	0.05440	0.00100	0.23602	362.0	10.0	341.6	6.4	469	71	DISC	DISC	5.6	0.80
CR-T-02f_88.FIN2	846	2.44	0.33660	0.00930	0.04561	0.00068	0.30086	294.1	7.0	287.5	4.2	340	49	287.5	4.2	2.2	0.41
CR-T-02f_89.FIN2	403.9	21.21	0.94100	0.01300	0.11000	0.00120	0.13562	671.2	6.9	672.8	7.2	671	24	672.8	7.2	0.2	0.05
CR-T-02f_90.FIN2	103.8	1.05	0.61900	0.02100	0.07790	0.00130	0.36559	490.0	12.0	483.3	7.8	527	66	483.3	7.8	1.4	0.95
CR-T-02f_91.FIN2	112.6	1.39	0.89800	0.02700	0.10590	0.00220	0.47410	651.0	14.0	650.0	13.0	646	61	650.0	13.0	0.2	0.72
CR-T-02f_92.FIN2	329	3.14	0.76800	0.01200	0.09470	0.00100	0.34784	574.8	6.9	583.1	6.1	572	29	583.1	6.1	1.4	0.32
CR-T-02f_93.FIN2	521	1.84	0.37400	0.00860	0.05070	0.00092	0.31004	321.8	6.3	318.7	5.6	338	42	318.7	5.6	1.0	0.54
CR-T-02f_94.FIN2	205.1	6.68	0.69400	0.01300	0.08661	0.00082	0.37684	534.4	7.4	535.3	4.9	516	34	535.3	4.9	0.2	0.15
CR-T-02f_95.FIN2	619	7.09	0.59090	0.00890	0.07632	0.00086	0.31352	471.1	5.6	474.0	5.1	458	29	474.0	5.1	0.6	0.14
CR-T-02f_96.FIN2	171.3	2.20	0.34050	0.00790	0.04731	0.00045	0.12225	295.6	5.9	297.9	2.8	248	44	297.9	2.8	0.8	0.45
CR-T-02f_97.FIN2	668	2.49	0.40460	0.00540	0.05501	0.00061	0.47259	344.9	3.9	345.1	3.7	335	29	345.1	3.7	0.1	0.40
CR-T-02f_98.FIN2	125.1	2.89	0.56500	0.01400	0.07288	0.00092	0.26101	454.2	9.2	453.7	5.5	451	51	453.7	5.5	0.1	0.35
CR-T-02f_99.FIN2	286.2	33.10	0.67800	0.06300	0.07660	0.00200	0.27501	499.0	21.0	475.0	12.0	571	86	475.0	12.0	4.8	Rim 0.03
CR-T-02f_99.FIN2	125.9	1.39	5.49100	0.05600	0.33500	0.00230	0.36324	1898.5	8.5	1862.0	11.0	1938	16	1938.0	16.0	3.9	Core 0.72
CR-T-02f_100.FIN2	550	10.58	0.58490	0.00860	0.07494	0.00063	0.22106	465.3	4.7	465.8	3.8	461	26	465.8	3.8	0.1	0.09
CR-T-02f_101.FIN2	226.4	2.37	0.62300	0.02000	0.05058	0.00065	0.09711	488.0	12.0	318.1	4.0	1374	62	DISC	DISC	34.8	0.42
CR-T-02f_102.FIN2	153.9	2.14	0.55200	0.01300	0.07220	0.00063	0.13893	445.2	8.7	449.3	3.8	407	54	449.3	3.8	0.9	0.47
CR-T-02f_103.FIN2	147.1	1.92	0.61800	0.02500	0.07500	0.00160	0.30290	481.0	15.0	465.9	9.3	566	67	465.9	9.3	3.1	0.52
CR-T-02f_104.FIN2	267.5	2.22	0.56970	0.00990	0.07319	0.00089	0.41803	457.9	6.3	455.5	5.3	474	33	455.5	5.3	0.5	0.45
CR-T-02f_105.FIN2	97.7	0.85	0.84700	0.01900	0.10050	0.00120	0.25738	620.0	10.0	618.1	7.1	624	45	618.1	7.1	0.3	1.18
CR-T-02f_106.FIN2	1405	5.19	0.34730	0.00770	0.04570	0.00043	0.05461	300.3	4.3	288.0	2.7	396	33	288.0	2.7	4.1	0.19
CR-T-02f_107.FIN2	50.1	2.50	0.33800	0.01500	0.04609	0.00087	0.02218	289.0	11.0	290.2	5.4	273	77	290.2	5.4	0.4	0.40
CR-T-02f_108.FIN2	249	1.91	0.37600	0.00940	0.05229	0.00052	0.03134	321.6	6.6	328.5	3.2	269	51	328.5	3.2	2.1	0.52
CR-T-02f_109.FIN2	204.3	6.74	0.82900	0.05400	0.07171	0.00083	0.76920	583.0	23.0	446.3	5.0	1084	86	DISC	DISC	23.4	0.15
CR-T-02f_110.FIN2	451.6	2.37	0.58630	0.00880	0.07496	0.00051	0.09332	467.5	5.6	465.9	3.0	468	31	465.9	3.0	0.3	0.42
CR-T-02f_111.FIN2	378.7	11.36	0.61100	0.01600	0.07572	0.00092	0.23646	482.8	9.7	471.0	5.4	548	47	471.0	5.4	2.4	0.09

Sample CR-T-02F

CR-T-02f_112.FIN2	64.4	2.38	6.36800	0.08300	0.37120	0.00330	0.31168	2018.0	11.0	2035.0	16.0	2003	18	2003.0	18.0	1.6	0.42
CR-T-02f_113.FIN2	144.5	2.56	0.61300	0.01200	0.07774	0.00088	0.32442	485.3	7.6	482.7	5.3	476	39	482.7	5.3	0.5	0.39
CR-T-02f_114.FIN2	298	2.35	0.36020	0.00920	0.04918	0.00042	0.05677	308.7	5.2	309.5	2.6	286	37	309.5	2.6	0.3	0.42
CR-T-02f_115.FIN2	752	76.00	0.44700	0.01800	0.05840	0.00140	0.15632	375.0	13.0	366.1	8.8	429	86	366.1	8.8	2.4	Rim 0.01
CR-T-02f_115.FIN2	280.4	2.92	0.89300	0.01300	0.10550	0.00100	0.53742	648.0	6.7	646.5	6.0	637	26	646.5	6.0	0.2	Core 0.34
CR-T-02f_116.FIN2	584	2.66	0.33450	0.00480	0.04657	0.00036	0.16129	292.3	3.6	293.4	2.2	276	28	293.4	2.2	0.4	0.38
CR-T-02f_117.FIN2	348.5	7.95	0.67000	0.04100	0.07810	0.00150	0.00979	518.0	23.0	484.7	8.8	650	110	DISC	DISC	6.4	Rim 0.13
CR-T-02f_117.FIN2	437.2	0.89	0.82600	0.01000	0.10000	0.00085	0.45656	611.0	5.7	614.7	5.0	610	25	614.7	5.0	0.6	Core 1.13
CR-T-02f_118.FIN2	1605	2.21	0.38420	0.00570	0.04959	0.00047	0.45566	329.9	4.1	312.0	2.9	460	30	DISC	DISC	5.4	0.45
CR-T-02f_119.FIN2	242.6	3.60	0.60700	0.01400	0.07604	0.00077	0.42001	474.9	7.7	472.3	4.6	483	40	472.3	4.6	0.5	Rim 0.28
CR-T-02f_119.FIN2	305.9	1.19	0.82000	0.02000	0.09980	0.00120	0.15314	607.0	11.0	613.3	7.1	581	53	613.3	7.1	1.0	Core 0.84
CR-T-02f_120.FIN2	375	18.80	0.59300	0.00870	0.07480	0.00057	0.25695	472.3	5.6	464.9	3.4	496	32	464.9	3.4	1.6	Rim 0.05
CR-T-02f_120.FIN2	457	1.92	0.76400	0.01300	0.09200	0.00120	0.35884	576.1	7.1	567.3	6.9	615	30	567.3	6.9	1.5	Core 0.52
CR-T-02f_121.FIN2	330.1	1.61	0.33970	0.00580	0.04729	0.00037	0.16146	295.5	4.3	297.8	2.3	273	34	297.8	2.3	0.8	0.62
CR-T-02f_122.FIN2	142.3	2.66	1.66000	0.02800	0.16720	0.00240	0.07777	988.0	11.0	996.0	13.0	967	27	967.0	27.0	3.0	0.38
CR-T-02f_123.FIN2	178.4	2.51	0.74100	0.02500	0.08610	0.00230	0.39142	561.0	14.0	532.0	14.0	692	67	DISC	DISC	5.2	0.40
CR-T-02f_124.FIN2	329.1	1.94	0.35450	0.00870	0.04784	0.00056	0.22640	308.3	6.7	301.2	3.4	350	57	301.2	3.4	2.3	0.52
CR-T-02f_125.FIN2	197.8	5.34	1.14800	0.02700	0.07902	0.00089	0.24960	777.0	12.0	490.2	5.3	1696	44	DISC	DISC	36.9	0.19
CR-T-02f_126.FIN2	1207	2.16	0.64500	0.01000	0.07850	0.00110	0.57086	505.5	6.2	486.9	6.4	575	29	486.9	6.4	3.7	0.46
CR-T-02f_127.FIN2	718	1.87	0.32220	0.00480	0.04500	0.00037	0.42840	283.7	3.7	283.7	2.3	272	31	283.7	2.3	0.0	0.54
CR-T-02f_128.FIN2	141.8	1.62	0.86100	0.02100	0.10430	0.00110	0.44300	629.0	11.0	639.1	6.7	588	48	639.1	6.7	1.6	0.62
CR-T-02f_129.FIN2	325	1.67	0.46600	0.01800	0.04591	0.00045	0.60609	384.0	12.0	289.3	2.8	946	64	DISC	DISC	24.7	0.60
CR-T-02f_130.FIN2	1281.8	8.29	0.34290	0.00400	0.04741	0.00049	0.59645	299.2	3.1	298.6	3.0	299	23	298.6	3.0	0.2	0.12
CR-T-02f_131.FIN2	98.6	2.07	0.38300	0.02300	0.04576	0.00091	0.22241	328.0	16.0	288.4	5.6	580	120	DISC	DISC	12.1	0.48
CR-T-02f_132.FIN2	32.22	2.20	1.19600	0.05000	0.12020	0.00210	0.15384	783.0	22.0	731.0	12.0	902	84	DISC	DISC	6.6	0.46
CR-T-02f_133.FIN2	237.3	6.80	0.57800	0.01300	0.07318	0.00091	0.02963	461.4	8.3	455.2	5.4	475	51	455.2	5.4	1.3	0.15
CR-T-02f_134.FIN2	117.2	0.62	0.87500	0.01900	0.10440	0.00110	0.22483	638.0	10.0	639.7	6.2	607	48	639.7	6.2	0.3	1.61
CR-T-02f_135.FIN2	131.1	6.57	0.70300	0.01800	0.08740	0.00110	0.26708	541.0	11.0	540.3	6.5	530	53	540.3	6.5	0.1	0.15
CR-T-02f_136.FIN2	577	8.77	0.89200	0.01000	0.10586	0.00066	0.18303	647.5	5.3	648.9	3.9	638	22	648.9	3.9	0.2	0.11
CR-T-02f_137.FIN2	140.44	1.84	0.56100	0.01300	0.07214	0.00062	0.15966	448.6	8.0	449.0	3.7	424	45	449.0	3.7	0.1	0.54
CR-T-02f_138.FIN	127.3	1.429	0.595	0.024	0.07207	0.00073	0.0769	462.8	9.7	448.5	4.4	503	54	448.5	4.4	3.0899	0.7
CR-T-02f_139.FIN	73.5	1.034	4.41	0.13	0.2768	0.004	0.4467	1718	25	1575	20	1901	49	DISC	DISC	17.149	0.97
CR-T-02f_140.FIN	86.91	3.626	0.586	0.015	0.07177	0.00078	0.1584	466	10	446.7	4.7	532	56	446.7	4.7	4.1416	0.28

Supplementary Table S1: U-Th composition and U-Pb isotopic composition for detrital zircon from the Falknis Breccia Fm. samples analyzed by LA-ICPMS

Sample Name: CR-T-03G																	
	Grain #	[U] ppm	U/Th	207/235	2σ error	206/238	2σ error	RHO	207/235	2σ error	206/238	2σ error	207/206	2σ error	Best age (Ma)	2σ error	Discordance*
CR-T-03G_1.FIN2	655	2.56	3.30200	0.02100	0.25840	0.00150	0.71477	1480.7	5.0	1481.4	7.7	1481	10	1481.3	9.7	0.0	0.39
CR-T-03G_2.FIN2	761	2.70	0.37390	0.00450	0.05137	0.00041	0.36858	322.8	3.3	323.1	2.5	329	27	323.1	2.5	0.1	0.37
CR-T-03G_3.FIN2	193.5	25.60	1.59200	0.07100	0.15850	0.00750	0.86166	965.0	29.0	950.0	41.0	1027	50	1027.0	50.0	7.5	Rim
CR-T-03G_3.FIN2	22.28	2.81	3.26600	0.09500	0.25930	0.00570	0.45462	1473.0	22.0	1484.0	29.0	1487	53	1487.0	53.0	0.2	Core
CR-T-03G_4.FIN2	180.9	1.08	1.80100	0.02600	0.17520	0.00160	0.44375	1044.8	9.3	1040.1	8.9	1056	27	1056.0	27.0	1.5	0.93
CR-T-03G_5.FIN2	31.7	0.64	1.65700	0.04400	0.16900	0.00280	0.45906	990.0	17.0	1002.0	15.0	972	52	972.0	52.0	3.1	1.56
CR-T-03G_6.FIN2	536	1.49	0.38320	0.00600	0.05216	0.00064	0.51709	329.3	4.4	327.7	3.9	339	32	327.7	3.9	0.5	0.67
CR-T-03G_7.FIN2	193.4	2.52	0.48720	0.00790	0.06410	0.00043	0.23972	403.0	5.4	400.6	2.6	400	36	400.6	2.6	0.6	0.40
CR-T-03G_8.FIN2	67.5	0.91	4.86600	0.06400	0.32230	0.00340	0.54021	1794.0	11.0	1802.0	17.0	1799	21	1799.0	21.0	0.2	1.10
CR-T-03G_9.FIN2	197.6	0.85	1.47300	0.02200	0.15260	0.00140	0.33331	916.9	9.2	915.1	7.7	920	30	920.0	30.0	0.5	1.18
CR-T-03G_10.FIN2	412.7	2.24	0.83800	0.01400	0.09990	0.00100	0.44066	617.6	7.6	613.5	6.1	642	33	613.5	6.1	0.7	0.45
CR-T-03G_11.FIN2	112.2	2.11	1.61000	0.03400	0.16230	0.00230	0.46315	973.0	13.0	969.0	13.0	1027	38	1027.0	38.0	5.6	0.47
CR-T-03G_12.FIN2	1414	2.83	0.39660	0.00350	0.05360	0.00031	0.33967	339.5	2.5	336.6	1.9	354	20	336.6	1.9	0.9	0.35
CR-T-03G_13.FIN2	58.3	1.51	5.51200	0.06500	0.34100	0.00310	0.53260	1901.0	10.0	1891.0	15.0	1904	19	1904.0	19.0	0.7	0.66
CR-T-03G_14.FIN2	227.3	5.30	5.50500	0.04200	0.33620	0.00240	0.54385	1901.3	6.6	1869.0	11.0	1934	14	1934.0	14.0	3.4	0.19
CR-T-03G_15.FIN2	916.6	119.40	0.38640	0.00560	0.05237	0.00047	0.34422	331.6	4.1	329.0	2.9	320	31	329.0	2.9	0.8	0.01
CR-T-03G_16.FIN2	376.8	1.68	0.95100	0.01400	0.10910	0.00110	0.48788	679.1	7.2	667.5	6.2	705	29	667.5	6.2	1.7	0.60
CR-T-03G_17.FIN2	368.3	7.21	0.54100	0.00910	0.06984	0.00063	0.37663	438.7	5.9	435.1	3.8	436	34	435.1	3.8	0.8	0.14
CR-T-03G_18.FIN2	650	6.53	0.39530	0.00440	0.05315	0.00034	0.35983	338.6	3.2	333.8	2.1	357	24	333.8	2.1	1.4	0.15
CR-T-03G_19.FIN2	602.1	1.11	0.46550	0.00790	0.06134	0.00068	0.29254	388.2	5.5	383.7	4.2	443	41	383.7	4.2	1.2	0.90
CR-T-03G_20.FIN2	450.7	1.96	0.37330	0.00510	0.05124	0.00036	0.18363	321.5	3.8	322.1	2.2	294	31	322.1	2.2	0.2	0.51
CR-T-03G_21.FIN2	1092	22.80	0.39810	0.00660	0.05352	0.00063	0.51940	341.1	4.6	336.1	3.8	360	31	336.1	3.8	1.5	Rim
CR-T-03G_21.FIN2	738	1.81	0.64420	0.00750	0.07976	0.00064	0.31208	504.7	4.7	494.6	3.8	568	27	494.6	3.8	2.0	Core
CR-T-03G_22.FIN2	223	1.07	0.37220	0.00750	0.05161	0.00041	0.15730	320.9	5.6	324.3	2.5	281	43	324.3	2.5	1.1	0.93
CR-T-03G_23.FIN2	280	1.02	0.39070	0.00730	0.05360	0.00050	0.21867	335.1	5.3	336.7	3.0	312	40	336.7	3.0	0.5	0.99
CR-T-03G_24.FIN2	487	2.77	0.47900	0.01700	0.05760	0.00170	0.63939	398.0	11.0	363.0	10.0	567	55	DISC	DISC	8.8	0.36
CR-T-03G_25.FIN2	234.9	1.96	8.26000	0.19000	0.37400	0.00910	0.79584	2263.0	21.0	2042.0	42.0	2467	25	DISC	DISC	17.2	0.51
CR-T-03G_26.FIN2	622	2.11	0.39990	0.00480	0.05449	0.00040	0.32176	341.4	3.5	342.1	2.4	332	26	342.1	2.4	0.2	0.47
CR-T-03G_27.FIN2	49.9	4.32	2.09800	0.07400	0.19370	0.00520	0.53742	1149.0	24.0	1140.0	28.0	1154	62	1154.0	62.0	1.2	Rim
CR-T-03G_27.FIN2	75.63	1.43	3.38000	0.07800	0.26060	0.00350	0.40524	1498.0	18.0	1492.0	18.0	1515	41	1515.0	41.0	1.5	Core
CR-T-03G_28.FIN2	403.6	1.06	0.37270	0.00800	0.05021	0.00057	0.28520	320.2	5.8	315.8	3.5	330	43	315.8	3.5	1.4	0.94
CR-T-03G_29.FIN2	412.3	0.82	3.86800	0.04000	0.27820	0.00230	0.59643	1607.6	8.4	1582.0	12.0	1649	16	1649.0	16.0	4.1	1.22
CR-T-03G_30.FIN2	492	1.82	0.81900	0.01200	0.09980	0.00110	0.50051	606.5	6.5	613.2	6.4	598	30	613.2	6.4	1.1	0.55
CR-T-03G_31.FIN2	474	1.37	0.41990	0.00640	0.05599	0.00049	0.06063	356.1	4.5	351.1	3.0	364	35	351.1	3.0	1.4	0.73
CR-T-03G_32.FIN2	474.8	5.58	0.56760	0.00850	0.07255	0.00060	0.25804	457.3	5.5	451.4	3.6	493	32	451.4	3.6	1.3	0.18
CR-T-03G_33.FIN2	916	5.78	0.37950	0.00360	0.05187	0.00032	0.31789	326.8	2.7	325.9	2.0	329	22	325.9	2.0	0.3	0.17
CR-T-03G_34.FIN2	73	2.53	5.42800	0.06500	0.33920	0.00320	0.61576	1887.0	10.0	1882.0	16.0	1891	17	1891.0	17.0	0.5	0.39
CR-T-03G_35.FIN2	142.1	0.72	0.37000	0.01200	0.04940	0.00069	0.23672	317.8	8.5	310.8	4.2	363	62	310.8	4.2	2.2	1.39

CR-T-03G_113.FIN2	66	1.86	2.78600	0.04700	0.23170	0.00240	0.58015	1352.0	13.0	1343.0	12.0	1370	26	1370.0	26.0	2.0	0.54
CR-T-03G_114.FIN2	39.72	0.78	3.30900	0.06400	0.26130	0.00350	0.48647	1480.0	15.0	1497.0	18.0	1470	32	1470.0	32.0	1.8	1.28
CR-T-03G_115.FIN2	362	0.46	1.52600	0.03200	0.15170	0.00270	0.61031	939.0	13.0	910.0	15.0	995	38	995.0	38.0	8.5	2.16
CR-T-03G_116.FIN2	379	1.32	0.35730	0.00610	0.04863	0.00046	0.24785	309.8	4.5	306.0	2.8	349	37	306.0	2.8	1.2	0.76
CR-T-03G_117.FIN2	227.2	1.98	4.68900	0.03300	0.31540	0.00190	0.54021	1764.4	5.9	1766.9	9.2	1753	11	1753.0	11.0	0.8	0.51
CR-T-03G_118.FIN2	41.93	0.61	3.31200	0.06100	0.25770	0.00300	0.27151	1476.0	14.0	1478.0	15.0	1459	33	1459.0	33.0	1.3	1.63
CR-T-03G_119.FIN2	249.5	6.14	0.77900	0.01100	0.09598	0.00074	0.16203	584.9	6.3	590.7	4.4	559	33	590.7	4.4	1.0	0.16
CR-T-03G_120.FIN2	472.1	2.87	2.63000	0.06100	0.21810	0.00420	0.74855	1309.0	18.0	1271.0	22.0	1363	30	1363.0	30.0	6.7	0.35
CR-T-03G_121.FIN2	95	1.00	0.39800	0.01500	0.05265	0.00073	0.08353	340.0	11.0	330.7	4.5	378	80	330.7	4.5	2.7	1.00
CR-T-03G_122.FIN2	321.3	2.66	0.40100	0.00740	0.05428	0.00053	0.35720	342.4	5.3	340.9	3.3	350	37	340.9	3.3	0.4	0.38
CR-T-03G_123.FIN2	14.18	1.80	2.04000	0.13000	0.19210	0.00610	0.41588	1114.0	41.0	1130.0	33.0	1020	120	DISC	DISC	10.8	0.56
CR-T-03G_124.FIN2	363.2	1.95	0.70300	0.01200	0.08458	0.00092	0.45368	540.1	7.4	523.8	5.5	641	37	523.8	5.5	3.0	0.51
CR-T-03G_125.FIN2	358.7	0.82	0.54400	0.01000	0.07100	0.00110	0.43090	441.0	6.7	442.0	6.6	409	41	442.0	6.6	0.2	1.22
CR-T-03G_126.FIN2	244.3	2.09	6.15100	0.07100	0.35010	0.00410	0.76646	1998.0	10.0	1937.0	20.0	2064	14	2064.0	14.0	6.2	0.48
CR-T-03G_127.FIN2	244.8	1.14	0.55200	0.01100	0.06903	0.00077	0.16328	445.8	7.1	430.2	4.6	515	46	430.2	4.6	3.5	0.88
CR-T-03G_128.FIN2	120.7	2.43	3.72900	0.07300	0.26450	0.00330	0.23512	1574.0	15.0	1512.0	17.0	1666	33	1666.0	33.0	9.2	0.41
CR-T-03G_129.FIN2	350.8	2.65	2.69500	0.02300	0.23030	0.00200	0.67223	1327.1	6.3	1336.0	10.0	1304	13	1304.0	13.0	2.5	0.38
CR-T-03G_130.FIN2	21.71	1.01	1.89000	0.06000	0.18350	0.00320	0.36723	1064.0	20.0	1086.0	18.0	1010	57	1010.0	57.0	7.5	0.99
CR-T-03G_131.FIN2	459	2.35	0.36510	0.00530	0.04954	0.00032	0.24188	316.0	4.0	311.7	2.0	321	33	311.7	2.0	1.4	0.43
CR-T-03G_132.FIN2	153.8	1.47	10.46000	0.22000	0.38850	0.00800	0.87324	2474.0	20.0	2112.0	37.0	2780	18	DISC	DISC	24.0	0.68
CR-T-03G_133.FIN2	313	5.81	0.40310	0.00740	0.05426	0.00050	0.32150	343.2	5.3	340.6	3.1	342	39	340.6	3.1	0.8	0.17
CR-T-03G_134.FIN2	1112	30.80	0.33000	0.01100	0.04464	0.00091	0.46256	289.2	8.3	281.5	5.6	313	63	281.5	5.6	2.7	Rim 0.03
CR-T-03G_134.FIN2	438	2.34	0.60800	0.01500	0.07950	0.00140	0.67072	482.5	9.7	493.0	8.4	459	51	493.0	8.4	2.2	Core 0.43
CR-T-03G_135.FIN2	27.58	1.30	4.39000	0.11000	0.29700	0.00570	0.56279	1710.0	21.0	1673.0	28.0	1732	42	1732.0	42.0	3.4	0.77
CR-T-03G_136.FIN2	150.2	2.01	2.58600	0.08300	0.21260	0.00570	0.70641	1295.0	24.0	1241.0	30.0	1350	46	1350.0	46.0	8.1	0.50
CR-T-03G_137.FIN	909	80	0.387	0.013	0.0503	0.0008	0.2373	331.4	9.1	316.5	5	376	68	316.5	5	4.4961	Rim 0
CR-T-03G_137.FIN	275.8	2.24	0.87	0.018	0.1059	0.0012	0.2956	635.6	9.5	648.5	7.2	595	43	648.5	7.2	2.0296	Core 0.4
CR-T-03G_138.FIN	438	2.66	0.3786	0.0061	0.0515	0.0004	0.2655	326.5	4.4	323.5	2.5	343	35	323.5	2.5	0.9188	0.4
CR-T-03G_139.FIN	234	1.33	11.84	0.18	0.4824	0.0071	0.6981	2589	14	2536	31	2645	19	2645	19	4.121	0.8
CR-T-03G_140.FIN	136.7	1.19	5.45	0.077	0.341	0.0049	0.7075	1892	13	1894	23	1885	21	1885	21	0.4775	0.8
CR-T-03G_141.FIN	630.2	31.3	0.4	0.005	0.0536	0.0004	0.2627	341.1	3.6	336.8	2.5	371	28	336.8	2.5	1.2606	0
CR-T-03G_142.FIN	97.3	0.78	0.798	0.015	0.0972	0.0011	0.2965	593.9	8.3	597.7	6.5	589	40	597.7	6.5	0.6398	1.3
CR-T-03G_143.FIN	584	18.9	0.4121	0.009	0.055	0.0008	0.305	351.6	6.5	345.2	5.1	392	53	345.2	5.1	1.8203	Rim 0.1
CR-T-03G_143.FIN	468.8	2.05	4.376	0.061	0.2033	0.0021	0.7842	1709	12	1193	11	2412	15	DISC	DISC	50.539	Core 0.5
CR-T-03G_144.FIN	214	4.3	5.137	0.043	0.3341	0.0027	0.7027	1841	7.1	1857	13	1818	12	1818	12	2.1452	0.2
CR-T-03G_145.FIN	335.3	1.17	0.496	0.013	0.0629	0.0008	0.185	407.9	8.8	392.9	5.1	478	53	392.9	5.1	3.6774	0.9
CR-T-03G_146.FIN	219.7	1.49	0.3081	0.0076	0.0429	0.0005	0.1917	272.7	5.8	271.2	2.8	280	52	271.2	2.8	0.5501	0.7
CR-T-03G_147.FIN	355.2	2.9	0.85	0.012	0.0996	0.0009	0.4957	623.8	6.5	611.6	5.4	670	26	611.6	5.4	1.9558	0.3
CR-T-03G_148.FIN	93.4	0.84	2.169	0.036	0.1992	0.0019	0.2309	1170	11	1170	10	1159	34	1159	34	0.9491	1.2
CR-T-03G_149.FIN	152.8	0.73	4.009	0.036	0.2875	0.002	0.4249	1634	7.2	1629	9.8	1645	16	1645	16	0.9726	1.4
CR-T-03G_150.FIN	137.2	1.12	0.539	0.011	0.0698	0.0006	0.0516	436.3	6.9	434.7	3.6	429	43	434.7	3.6	0.3667	0.9

Sample CR-T-03H

Supplementary Table S1: U-Th composition and U-Pb isotopic composition for detrital zircon from the Falknis Breccia Fm. samples analyzed by LA-ICPMS

Sample Name: CR-T-03H	Grain #	[U] ppm	U/Th	207/235		2σ error	206/238	2σ error	RHO	207/235		2σ error	206/238	2σ error	207/206	2σ error	Best age (Ma)	2σ error	Discordance*	Rim/C Th/U
				Age Ma	r					Age (Ma)	error									
CR-T-03h_1.FIN2	397	2,11	0,60750	0,00850	0,07725	0,00062	0,38440	482,0	5,4	479,6	3,7	469	28	479,6	3,7	0,5	0,47			
CR-T-03h_2.FIN2	264,2	1,57	0,64900	0,01600	0,08290	0,00170	0,56503	507,2	9,6	513,0	10,0	524	45	513,0	10,0	1,1	0,64			
CR-T-03h_3.FIN2	436,2	7,15	0,53050	0,00850	0,06954	0,00054	0,26953	432,4	5,6	433,3	3,3	462	35	433,3	3,3	0,2	0,14			
CR-T-03h_4.FIN2	485	1,87	0,38270	0,00580	0,05270	0,00035	0,13665	328,9	4,2	331,0	2,1	274	30	331,0	2,1	0,6	0,54			
CR-T-03h_5.FIN2	384,2	4,22	5,57000	0,14000	0,32310	0,00830	0,77353	1911,0	22,0	1803,0	40,0	2047	30	DISC	DISC	11,9	0,24			
CR-T-03h_6.FIN2	121,9	1,15	0,70500	0,01800	0,08900	0,00110	0,21597	543,0	11,0	549,6	6,5	578	53	549,6	6,5	1,2	0,87			
CR-T-03h_7.FIN2	347	1,22	0,39650	0,00690	0,05409	0,00055	0,25591	338,5	5,0	339,5	3,4	306	36	339,5	3,4	0,3	0,82			
CR-T-03h_8.FIN2	269	1,85	0,39710	0,00850	0,05428	0,00052	0,09679	338,9	6,3	340,8	3,2	265	44	340,8	3,2	0,6	0,54			
CR-T-03h_9.FIN2	481	0,92	0,37090	0,00610	0,05050	0,00041	0,31587	320,6	4,5	317,5	2,5	320	33	317,5	2,5	1,0	1,09			
CR-T-03h_10.FIN2	213,7	1,54	1,69700	0,02400	0,17010	0,00220	0,63933	1005,3	8,8	1012,0	12,0	1031	22	1031,0	22,0	1,8	0,65			
CR-T-03h_11.FIN2	242,5	3,77	0,45500	0,01000	0,06287	0,00061	0,16601	380,2	7,2	393,0	3,7	362	50	393,0	3,7	3,4	0,27			
CR-T-03h_12.FIN2	644,6	6,77	9,50200	0,08500	0,42770	0,00390	0,60288	2388,8	8,3	2296,0	18,0	2526	12	2526,0	12,0	9,1	0,15			
CR-T-03h_13.FIN2	280,6	1,72	6,76600	0,04600	0,38160	0,00300	0,61087	2082,2	6,0	2084,0	14,0	2107	10	2106,8	9,5	1,1	0,58			
CR-T-03h_14.FIN2	89,2	1,33	1,60900	0,02900	0,16480	0,00230	0,46108	973,0	11,0	982,0	13,0	987	32	987,0	32,0	0,5	0,75			
CR-T-03h_15.FIN2	1045	1,98	0,42900	0,01700	0,05014	0,00097	0,43927	361,0	12,0	315,4	5,9	347	65	DISC	DISC	12,6	0,51			
CR-T-03h_16.FIN2	166,4	3,10	4,06200	0,04100	0,29460	0,00220	0,34395	1646,3	8,3	1664,0	11,0	1628	17	1628,0	17,0	2,2	0,32			
CR-T-03h_17.FIN2	1004	####	0,37950	0,00870	0,04943	0,00066	0,40511	326,2	6,4	311,0	4,0	402	47	311,0	4,0	4,7	Rim	0,03		
CR-T-03h_17.FIN2	224	3,83	0,63700	0,02700	0,08010	0,00190	0,33434	499,0	17,0	496,0	11,0	515	94	496,0	11,0	0,6	Core	0,26		
CR-T-03h_18.FIN2	247,2	1,96	0,37800	0,01300	0,05254	0,00087	0,13591	325,2	9,9	330,0	5,4	316	76	330,0	5,4	1,5	0,51			
CR-T-03h_19.FIN2	356	6,72	0,50970	0,00800	0,06740	0,00059	0,22100	418,5	5,4	420,4	3,6	447	34	420,4	3,6	0,5	0,15			
CR-T-03h_20.FIN2	727	2,07	3,20000	0,10000	0,20050	0,00640	0,78951	1458,0	25,0	1177,0	35,0	1517	41	DISC	DISC	22,4	Rim	0,48		
CR-T-03h_20.FIN2	181,7	1,59	3,78000	0,04700	0,29150	0,00340	0,57596	1587,0	10,0	1649,0	17,0	1566	20	1566,0	20,0	5,3	Core	0,63		
CR-T-03h_21.FIN2	478,9	6,41	0,50300	0,01700	0,06690	0,00130	0,32758	413,0	11,0	417,3	7,6	399	67	417,3	7,6	1,0	0,16			
CR-T-03h_22.FIN2	1060	1,43	0,36380	0,00430	0,05002	0,00029	0,33499	315,0	3,2	314,6	1,8	341	21	314,6	1,8	0,1	0,70			
CR-T-03h_23.FIN2	362	1,33	0,38680	0,00760	0,05286	0,00063	0,30826	331,7	5,5	332,2	3,9	308	39	332,2	3,9	0,2	0,75			
CR-T-03h_24.FIN2	75,89	0,97	3,91700	0,05000	0,29220	0,00260	0,46556	1618,0	10,0	1651,0	13,0	1623	22	1623,0	22,0	1,7	1,03			
CR-T-03h_25.FIN2	699,8	2,53	2,96700	0,03000	0,24050	0,00230	0,78375	1399,1	7,6	1391,0	12,0	1468	11	1468,0	11,0	5,2	0,40			
CR-T-03h_26.FIN2	322,8	1,87	1,93100	0,02800	0,18360	0,00200	0,42488	1092,0	9,7	1086,0	11,0	1158	28	1158,0	28,0	6,2	0,54			
CR-T-03h_27.FIN2	157,8	2,57	1,74300	0,02200	0,17300	0,00110	0,17936	1023,2	8,1	1028,4	6,1	1061	27	1061,0	27,0	3,1	0,39			
CR-T-03h_28.FIN2	228,6	2,38	4,75700	0,04200	0,31680	0,00220	0,41954	1775,8	7,4	1774,0	11,0	1790	12	1790,0	12,0	0,9	0,42			
CR-T-03h_29.FIN2	182,5	0,66	5,85900	0,05900	0,35550	0,00320	0,57870	1955,0	8,8	1963,0	15,0	2010	16	2010,0	16,0	2,3	1,52			
CR-T-03h_30.FIN2	126,1	2,32	1,43200	0,02200	0,15090	0,00120	0,31313	900,1	9,3	905,8	6,8	927	30	927,0	30,0	2,3	0,43			
CR-T-03h_31.FIN2	138,4	1,21	0,71000	0,01600	0,08822	0,00095	0,20082	546,5	9,9	544,8	5,6	600	49	544,8	5,6	0,3	0,83			

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CR-T-03h_32.FIN2	195,2	0,86	0,38300	0,00900	0,05259	0,00055	0,20170	328,6	6,5	330,3	3,4	340	49	330,3	3,4	0,5	1,17
CR-T-03h_33.FIN2	401,1	3,30	0,49830	0,00860	0,06484	0,00079	0,48664	409,6	5,8	405,1	4,7	411	33	405,1	4,7	1,1	0,30
CR-T-03h_34.FIN2	57,5	0,71	2,00500	0,06400	0,18600	0,00310	0,34734	1113,0	21,0	1099,0	17,0	1147	62	1147,0	62,0	4,2	1,41
CR-T-03h_35.FIN2	145,4	1,12	4,05800	0,03900	0,30550	0,00210	0,44052	1646,7	7,9	1718,0	10,0	1578	17	1578,0	17,0	8,9	0,89
CR-T-03h_36.FIN2	473	####	1,61900	0,02900	0,15150	0,00290	0,53650	979,0	11,0	909,0	16,0	922	28	922,0	28,0	1,4	Rim 0,07
CR-T-03h_36.FIN2	126,7	1,83	2,90200	0,06200	0,24090	0,00370	0,36696	1384,0	16,0	1391,0	19,0	1386	38	1386,0	38,0	0,4	Core 0,55
CR-T-03h_37.FIN2	331,2	1,76	0,78690	0,00890	0,09608	0,00060	0,32463	589,9	5,1	591,8	3,5	590	24	591,8	3,5	0,3	0,57
CR-T-03h_38.FIN2	208,2	1,34	1,97000	0,03400	0,18780	0,00280	0,35898	1105,0	11,0	1109,0	15,0	995	31	DISC	DISC	11,5	0,75
CR-T-03h_39.FIN2	521,4	1,98	0,37640	0,00640	0,05158	0,00046	0,40298	323,5	4,7	324,2	2,8	253	31	324,2	2,8	0,2	0,50
CR-T-03h_40.FIN2	340	1,58	0,38330	0,00690	0,05213	0,00046	0,34714	328,7	5,0	327,5	2,8	282	33	327,5	2,8	0,4	0,63
CR-T-03h_41.FIN2	262,8	1,32	3,61200	0,08100	0,22570	0,00420	0,57039	1553,0	17,0	1311,0	22,0	1913	37	DISC	DISC	31,5	0,76
CR-T-03h_42.FIN2	233	1,93	0,75000	0,01000	0,09196	0,00064	0,18560	567,6	6,0	567,2	3,7	551	28	567,2	3,7	0,1	0,52
CR-T-03h_43.FIN2	429,9	1,55	0,56600	0,01500	0,07120	0,00120	0,31349	455,8	9,8	443,6	7,3	570	59	443,6	7,3	2,7	0,65
CR-T-03h_44.FIN2	258,4	2,57	0,37400	0,00780	0,05061	0,00047	0,12394	322,0	5,7	318,2	2,9	432	48	318,2	2,9	1,2	0,39
CR-T-03h_45.FIN2	176	1,45	3,31700	0,03900	0,25860	0,00210	0,36470	1485,9	9,0	1483,0	11,0	1496	18	1496,0	18,0	0,9	0,69
CR-T-03h_46.FIN2	457,6	4,32	0,42340	0,00670	0,05730	0,00060	0,37846	358,4	4,8	359,3	3,7	445	34	359,3	3,7	0,3	0,23
CR-T-03h_47.FIN2	415	2,66	3,29100	0,02600	0,25800	0,00200	0,49601	1478,2	6,1	1480,0	10,0	1539	14	1539,0	14,0	3,8	0,38
CR-T-03h_48.FIN2	659	4,71	0,39500	0,00680	0,05367	0,00052	0,32116	337,9	4,8	336,9	3,2	340	33	336,9	3,2	0,3	0,21
CR-T-03h_49.FIN2	57,14	2,22	1,64600	0,04700	0,16180	0,00230	0,25432	988,0	18,0	966,0	13,0	1102	55	DISC	DISC	12,3	0,45
CR-T-03h_50.FIN2	1276	0,88	0,42700	0,01100	0,05188	0,00078	0,31326	360,0	7,9	326,0	4,8	336	52	DISC	DISC	9,4	Rim 1,14
CR-T-03h_50.FIN2	778	1,77	0,45090	0,00720	0,06098	0,00054	0,38198	377,6	5,0	381,5	3,3	423	34	381,5	3,3	1,0	Core 0,56
CR-T-03h_51.FIN2	200,8	2,36	0,39600	0,01300	0,05427	0,00072	0,19083	339,1	9,4	340,6	4,4	271	67	340,6	4,4	0,4	0,42
CR-T-03h_52.FIN2	850	1,80	0,53000	0,01300	0,07120	0,00140	0,62802	432,0	8,5	443,1	8,6	437	42	443,1	8,6	2,6	0,56
CR-T-03h_53.FIN2	178,2	0,68	0,37350	0,00920	0,05148	0,00050	0,17951	320,9	6,7	323,6	3,1	304	50	323,6	3,1	0,8	1,46
CR-T-03h_54.FIN2	327,1	1,28	0,71600	0,01000	0,08930	0,00065	0,22510	545,9	6,0	551,3	3,8	542	31	551,3	3,8	1,0	0,78
CR-T-03h_55.FIN2	336,9	1,68	0,37410	0,00650	0,05082	0,00061	0,49130	322,0	4,8	319,4	3,8	312	31	319,4	3,8	0,8	0,59
CR-T-03h_56.FIN2	308	1,09	0,65700	0,01100	0,08280	0,00100	0,45573	513,6	6,5	512,4	6,2	503	31	512,4	6,2	0,2	0,92
CR-T-03h_57.FIN2	272,1	2,98	0,55650	0,00980	0,07197	0,00067	0,39971	447,7	6,3	447,9	4,0	471	34	447,9	4,0	0,0	0,34
CR-T-03h_58.FIN2	494,9	1,81	0,32610	0,00530	0,04541	0,00040	0,24603	286,4	4,0	286,3	2,5	349	37	286,3	2,5	0,0	0,55
CR-T-03h_59.FIN2	437,1	0,47	0,24950	0,00600	0,03566	0,00037	0,18009	225,9	4,8	225,9	2,3	298	51	225,9	2,3	0,0	2,12
CR-T-03h_60.FIN2	133,4	1,09	1,67600	0,02100	0,16810	0,00130	0,23518	998,8	7,8	1001,2	7,1	1000	24	1000,0	24,0	0,1	0,92
CR-T-03h_61.FIN2	171,7	1,96	2,01900	0,03300	0,18580	0,00180	0,08967	1120,0	11,0	1100,0	10,0	1260	36	DISC	DISC	12,7	0,51
CR-T-03h_62.FIN2	334	1,24	0,37940	0,00730	0,05193	0,00038	0,08102	326,0	5,3	326,3	2,3	408	42	326,3	2,3	0,1	0,80
CR-T-03h_63.FIN2	409,8	2,21	0,57910	0,00760	0,07496	0,00054	0,25885	462,9	4,9	465,9	3,3	494	28	465,9	3,3	0,6	0,45
CR-T-03h_64.FIN2	658,8	3,20	0,53100	0,00720	0,06958	0,00050	0,24142	432,4	4,8	433,6	3,0	526	29	433,6	3,0	0,3	0,31
CR-T-03h_65.FIN2	1021	3,15	0,61110	0,00830	0,07790	0,00060	0,37441	484,6	5,1	483,8	3,5	598	28	483,8	3,5	0,2	0,32
CR-T-03h_66.FIN2	565	1,05	0,57300	0,01000	0,07455	0,00075	0,02339	459,1	6,5	463,5	4,5	513	48	463,5	4,5	1,0	0,95
CR-T-03h_67.FIN2	607	2,33	0,39030	0,00580	0,05328	0,00040	0,24456	334,6	4,2	334,6	2,5	368	33	334,6	2,5	0,0	0,43

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CR-T-03h_68.FIN2	144,4	1,45	0,86100	0,01800	0,10325	0,00083	0,18053	629,5	9,7	633,2	4,8	574	42	633,2	4,8	0,6	0,69
CR-T-03h_69.FIN2	76	1,31	1,90700	0,03900	0,18330	0,00200	0,27596	1081,0	14,0	1085,0	11,0	1080	41	1080,0	41,0	0,5	0,76
CR-T-03h_70.FIN2	1096	####	0,44100	0,01800	0,05240	0,00180	0,59791	372,0	13,0	330,0	11,0	339	70	DISC	DISC	11,3	0,04
CR-T-03h_71.FIN2	652	2,03	0,39530	0,00590	0,05386	0,00041	0,19215	338,3	4,4	338,1	2,5	340	31	338,1	2,5	0,1	0,49
CR-T-03h_72.FIN2	478,5	5,36	0,38890	0,00640	0,05324	0,00035	0,07110	333,6	4,7	334,3	2,2	310	35	334,3	2,2	0,2	0,19
CR-T-03h_73.FIN2	593	1,29	0,57900	0,01200	0,07488	0,00074	0,20117	464,0	7,7	465,4	4,5	532	45	465,4	4,5	0,3	0,78
CR-T-03h_74.FIN2	218,2	1,77	3,70800	0,05800	0,27620	0,00390	0,72522	1571,0	12,0	1573,0	20,0	1586	20	1586,0	20,0	0,8	0,57
CR-T-03h_75.FIN2	722,1	3,22	0,41780	0,00650	0,05639	0,00055	0,08887	354,8	4,7	353,6	3,3	355	36	353,6	3,3	0,3	0,31
CR-T-03h_76.FIN2	705,6	1,93	1,60100	0,02000	0,15890	0,00190	0,61415	969,1	8,0	950,0	10,0	1102	21	DISC	DISC	13,8	0,52
CR-T-03h_77.FIN2	699	1,01	0,64800	0,01000	0,08026	0,00085	0,41111	506,4	6,3	497,6	5,1	640	31	497,6	5,1	1,7	0,99
CR-T-03h_78.FIN2	509	2,37	0,47200	0,01000	0,06319	0,00062	0,25987	393,8	7,2	394,9	3,8	475	48	394,9	3,8	0,3	0,42
CR-T-03h_79.FIN2	128,6	2,10	3,36300	0,05900	0,26900	0,00390	0,69543	1497,0	14,0	1538,0	20,0	1489	25	1489,0	25,0	3,3	0,48
CR-T-03h_80.FIN2	1447	4,65	0,70400	0,01700	0,06560	0,00150	0,54080	541,6	9,9	409,5	9,2	937	55	DISC	DISC	24,4	Rim 0,22
CR-T-03h_80.FIN2	412,9	1,78	1,95600	0,05900	0,18420	0,00460	0,78030	1100,0	21,0	1089,0	25,0	1245	42	DISC	DISC	12,5	Core 0,56
CR-T-03h_81.FIN2	861	####	0,50400	0,02000	0,05030	0,00110	0,12859	414,0	14,0	316,4	7,0	520	110	DISC	DISC	23,6	Rim 0,02
CR-T-03h_81.FIN2	158,1	1,66	1,66300	0,02600	0,16810	0,00150	0,30876	996,0	10,0	1001,4	8,4	1069	33	1069,0	33,0	6,3	Core 0,60
CR-T-03h_82.FIN2	294,4	3,98	0,70000	0,01400	0,08920	0,00095	0,39716	538,0	8,3	551,2	5,7	591	41	551,2	5,7	2,5	0,25
CR-T-03h_83.FIN2	168,5	0,95	0,37850	0,00940	0,05228	0,00056	0,29594	325,1	6,9	328,4	3,4	377	50	328,4	3,4	1,0	1,05
CR-T-03h_84.FIN2	81,5	6,70	0,62900	0,02400	0,08150	0,00150	0,39646	492,0	14,0	505,6	9,2	506	72	505,6	9,2	2,8	0,15
CR-T-03h_85.FIN2	119,4	2,62	1,95000	0,02800	0,18600	0,00150	0,36905	1096,7	9,5	1099,4	8,2	1146	28	1146,0	28,0	4,1	0,38
CR-T-03h_86.FIN2	108,6	1,38	0,82900	0,01700	0,09970	0,00130	0,30676	610,7	9,4	612,5	7,8	658	45	612,5	7,8	0,3	0,72
CR-T-03h_87.FIN2	523	7,54	0,52320	0,00890	0,06890	0,00100	0,60684	426,3	5,9	429,3	6,2	453	31	429,3	6,2	0,7	0,13
CR-T-03h_88.FIN2	88,1	1,07	3,95500	0,05000	0,29370	0,00260	0,50080	1622,0	10,0	1659,0	13,0	1632	21	1632,0	21,0	1,7	0,93
CR-T-03h_89.FIN2	492	####	0,84200	0,01900	0,09420	0,00140	0,44097	619,0	10,0	580,3	8,1	633	40	DISC	DISC	6,3	Rim 0,05
CR-T-03h_89.FIN2	356,4	1,42	1,45000	0,01800	0,15420	0,00120	0,49531	910,8	7,6	924,9	6,9	931	22	931,0	22,0	0,7	Core 0,70
CR-T-03h_90.FIN2	151	1,55	2,82900	0,04500	0,23820	0,00320	0,50212	1363,0	12,0	1376,0	17,0	1338	25	1338,0	25,0	2,8	0,65
CR-T-03h_91.FIN2	551	1,94	0,39790	0,00720	0,05504	0,00061	0,23740	340,0	5,1	345,3	3,7	344	41	345,3	3,7	1,6	0,52
CR-T-03h_92.FIN2	240,9	1,70	0,49050	0,00970	0,06511	0,00078	0,47789	404,5	6,7	406,5	4,7	466	40	406,5	4,7	0,5	0,59
CR-T-03h_93.FIN2	85,6	2,00	1,92700	0,04100	0,17340	0,00300	0,39292	1091,0	14,0	1030,0	17,0	1273	42	DISC	DISC	19,1	0,50
CR-T-03h_94.FIN2	45	1,70	2,58700	0,05500	0,22120	0,00350	0,47888	1297,0	16,0	1288,0	19,0	1377	38	1377,0	38,0	6,5	0,59
CR-T-03h_95.FIN2	99	1,23	0,86300	0,02600	0,10250	0,00180	0,31544	628,0	14,0	629,0	11,0	706	64	629,0	11,0	0,2	0,81
CR-T-03h_96.FIN2	50,3	3,23	1,46600	0,03300	0,15390	0,00190	0,30336	916,0	13,0	922,0	11,0	921	43	921,0	43,0	0,1	0,31
CR-T-03h_97.FIN2	1078	####	0,55830	0,00680	0,07220	0,00072	0,36505	450,9	4,4	449,5	4,3	454	24	449,5	4,3	0,3	0,08
CR-T-03h_98.FIN2	415,3	2,41	1,98400	0,02700	0,19010	0,00210	0,58453	1110,7	9,1	1122,0	11,0	1141	23	1141,0	23,0	1,7	0,42
CR-T-03h_99.FIN2	76,1	0,70	#####	0,12000	0,50840	0,00390	0,51107	2637,2	8,7	2647,0	17,0	2659	13	2659,0	13,0	0,5	1,43
CR-T-03h_100.FIN2	200,7	####	0,39390	0,00790	0,05359	0,00055	0,22862	335,8	5,7	336,6	3,3	333	41	336,6	3,3	0,2	0,08
CR-T-03h_101.FIN2	280,6	1,06	5,06200	0,03700	0,32860	0,00210	0,49159	1828,9	6,2	1831,0	10,0	1883	11	1883,0	11,0	2,8	0,94
CR-T-03h_102.FIN2	347,2	1,16	0,38140	0,00650	0,05265	0,00039	0,18083	328,2	4,7	330,9	2,4	344	38	330,9	2,4	0,8	0,86

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CR-T-03h_103.FIN2	64,7	1,48	#####	0,14000	0,53340	0,00490	0,68848	2751,9	9,4	2755,0	21,0	2800	12	2800,0	12,0	1,6	0,67
CR-T-03h_104.FIN2	1006	####	0,46300	0,01700	0,05350	0,00180	0,38547	385,0	11,0	336,0	11,0	305	81	DISC	DISC	12,7	Rim 0,04
CR-T-03h_104.FIN2	352,1	3,28	9,63800	0,08200	0,41560	0,00320	0,57344	2400,8	7,9	2240,0	14,0	2601	13	DISC	DISC	13,9	Core 0,30
CR-T-03h_105.FIN2	486	1,91	0,56570	0,00710	0,07264	0,00045	0,11796	454,3	4,5	452,0	2,7	464	25	452,0	2,7	0,5	0,52
CR-T-03h_106.FIN2	871	7,38	0,37920	0,00520	0,05172	0,00038	0,34526	326,9	3,8	325,2	2,3	389	29	325,2	2,3	0,5	0,14
CR-T-03h_107.FIN2	730	5,71	0,57690	0,00630	0,07449	0,00061	0,43547	462,5	4,1	463,3	3,7	508	20	463,3	3,7	0,2	0,18
CR-T-03h_108.FIN2	71,86	1,21	1,39100	0,02900	0,14780	0,00160	0,26606	885,0	12,0	888,3	9,2	944	42	944,0	42,0	5,9	0,83
CR-T-03h_109.FIN2	785	4,34	0,34150	0,00590	0,04786	0,00052	0,38964	298,6	4,5	301,3	3,2	308	35	301,3	3,2	0,9	0,23
CR-T-03h_110.FIN2	160,3	2,02	0,58300	0,02800	0,06660	0,00150	0,20180	465,0	17,0	415,7	9,3	425	97	DISC	DISC	10,6	Rim 0,50
CR-T-03h_110.FIN2	142,7	1,19	3,00400	0,09100	0,19360	0,00480	0,43220	1406,0	23,0	1141,0	26,0	1853	53	DISC	DISC	38,4	Core 0,84
CR-T-03h_111.FIN2	359	2,56	0,37710	0,00600	0,05185	0,00035	0,17025	324,6	4,5	325,8	2,1	269	34	325,8	2,1	0,4	0,39
CR-T-03h_112.FIN2	241	0,78	0,37800	0,00730	0,05224	0,00054	0,21754	324,7	5,4	328,2	3,3	296	41	328,2	3,3	1,1	1,28
CR-T-03h_113.FIN2	664,3	3,80	0,37700	0,00930	0,05209	0,00067	0,59050	324,1	7,2	327,3	4,1	366	55	327,3	4,1	1,0	0,26
CR-T-03h_114.FIN2	406	3,07	0,32100	0,01300	0,04602	0,00069	0,19313	282,0	10,0	290,0	4,3	262	84	290,0	4,3	2,8	0,33
CR-T-03h_115.FIN2	518	4,64	0,37640	0,00570	0,05172	0,00047	0,30218	323,5	4,2	325,0	2,9	347	32	325,0	2,9	0,5	0,22
CR-T-03h_116.FIN2	216	1,68	1,72200	0,02500	0,17200	0,00150	0,29837	1015,4	9,5	1022,7	8,4	1079	29	1079,0	29,0	5,2	0,60
CR-T-03h_117.FIN2	86	2,01	3,14500	0,04900	0,25060	0,00320	0,47053	1444,0	12,0	1443,0	17,0	1505	27	1505,0	27,0	4,1	0,50
CR-T-03h_118.FIN2	1108	1,62	0,36500	0,00470	0,05025	0,00050	0,46294	315,6	3,5	316,0	3,1	396	25	316,0	3,1	0,1	0,62
CR-T-03h_119.FIN2	486,1	4,41	0,55700	0,00920	0,07219	0,00095	0,49638	450,5	6,0	449,2	5,7	506	33	449,2	5,7	0,3	0,23
CR-T-03h_120.FIN2	1196	4,53	0,40200	0,01300	0,04877	0,00069	0,27477	342,4	9,2	306,9	4,2	402	67	DISC	DISC	10,4	0,22
CR-T-03h_121.FIN2	123,8	0,90	3,12800	0,03700	0,25120	0,00190	0,23619	1438,8	9,0	1445,0	10,0	1498	23	1498,0	23,0	3,5	1,11
CR-T-03h_122.FIN2	799	1,87	0,69080	0,00920	0,08245	0,00057	0,12735	532,9	5,5	510,6	3,4	637	23	510,6	3,4	4,2	0,53
CR-T-03h_123.FIN2	173,5	3,03	3,68600	0,05900	0,27430	0,00310	0,63477	1570,0	13,0	1562,0	16,0	1659	27	1659,0	27,0	5,8	0,33
CR-T-03h_124.FIN2	633	8,68	0,36890	0,00880	0,05047	0,00079	0,65170	319,1	6,6	317,3	4,8	412	40	317,3	4,8	0,6	0,12
CR-T-03h_125.FIN2	376,4	1,41	0,46480	0,00880	0,06172	0,00081	0,37780	387,7	6,1	385,9	4,9	482	42	385,9	4,9	0,5	0,71
CR-T-03h_126.FIN2	82,37	0,84	1,82900	0,04200	0,17770	0,00210	0,42395	1056,0	15,0	1055,0	11,0	1145	43	1145,0	43,0	7,9	1,18
CR-T-03h_127.FIN2	196,4	1,27	9,88000	0,14000	0,43920	0,00610	0,54222	2425,0	14,0	2350,0	27,0	2543	23	2543,0	23,0	7,6	0,79
CR-T-03h_128.FIN2	326,3	1,76	3,99400	0,03300	0,29320	0,00230	0,63256	1632,5	6,8	1657,0	12,0	1646	12	1646,0	12,0	0,7	0,57
CR-T-03h_129.FIN2	325,3	1,87	0,38690	0,00950	0,05142	0,00087	0,59316	331,2	7,0	323,1	5,3	448	44	323,1	5,3	2,4	0,54
CR-T-03h_130.FIN2	680	2,28	0,39540	0,00500	0,05363	0,00031	0,13070	337,8	3,6	336,7	1,9	341	25	336,7	1,9	0,3	0,44
CR-T-03h_131.FIN2	286,1	2,94	0,71200	0,01500	0,08449	0,00097	0,22403	544,5	8,7	522,7	5,8	516	40	522,7	5,8	4,0	0,34
CR-T-03h_132.FIN2	2098	9,79	0,30710	0,00730	0,04188	0,00095	0,61966	273,3	5,6	265,0	5,8	345	43	265,0	5,8	3,0	0,10
CR-T-03h_133.FIN2	866	1,92	0,76470	0,00920	0,09294	0,00091	0,49649	576,2	5,3	573,3	5,3	581	23	573,3	5,3	0,5	0,52
CR-T-03h_134.FIN2	438	1,97	0,71500	0,01900	0,05482	0,00087	0,20095	549,0	11,0	344,0	5,3	1559	52	DISC	DISC	37,3	0,51
CR-T-03h_135.FIN2	264	0,52	0,79000	0,01400	0,09720	0,00110	0,29022	592,0	8,3	598,9	6,6	597	39	598,9	6,6	1,2	1,94
CR-T-03h_136.FIN2	193,8	1,08	0,94900	0,02800	0,10970	0,00210	0,50041	675,0	15,0	670,0	12,0	725	59	670,0	12,0	0,7	0,92
CR-T-03h_137.FIN2	343	2,22	0,59320	0,00860	0,07628	0,00058	0,17298	472,1	5,5	474,0	3,5	441	32	474,0	3,5	0,4	0,45
CR-T-03h_138.FIN2	695	2,38	0,38230	0,00540	0,05218	0,00038	0,32187	328,1	3,9	327,8	2,3	301	27	327,8	2,3	0,1	0,42

Sample CR-T-03H

CR-T-03h_139.FIN2	767	2,00	3,49300	0,05200	0,25070	0,00380	0,82083	1524,0	12,0	1441,0	20,0	1676	16	DISC	DISC	14,0	0,50
CR-T-03h_140.FIN2	470	2,07	0,26140	0,00490	0,03692	0,00033	0,32737	235,2	3,9	233,7	2,1	291	38	233,7	2,1	0,6	0,48