

Bingshuang Zhao, Xiaoping Long, Jin Luo, Yunpeng Dong, Caiyun Lan, Jingyu Wang, and Bin Wu, 2021, Late Neoproterozoic to early Paleozoic paleogeographic position of the Yangtze block and the change of tectonic setting in its northwestern margin: Evidence from detrital zircon U-Pb ages and Hf isotopes of sedimentary rocks: GSA Bulletin, <https://doi.org/10.1130/B35980.1>.

## Supplemental Material

### Appendix

**Figure A1.** Representative cathodoluminescence images of zircons from the late Neoproterozoic to Silurian sedimentary rocks, showing internal structure and morphology of zircons.

**Supplementary Table 1.** U–Pb dating results for detrital zircons of the late Neoproterozoic, early Cambrian and early Silurian sedimentary rocks from the northwestern margin of the Yangtze Block.

**Supplementary Table 2.** In situ Lu–Hf isotopic data for detrital zircons of the late Neoproterozoic, early Cambrian and early Silurian sedimentary rocks from the northwestern margin of the Yangtze Block.

## APPENDIX A

### Analytical Methods

#### *Zircon morphology*

In this study, four sedimentary samples were prepared for detrital zircon U–Pb dating and Hf in-situ analyses, and all laboratory work was finished at the State Key Laboratory of Continental Dynamics, Northwest University, China. These rock samples were milled at first, and then their heavy minerals were separated by using heavy liquid-magnetic techniques and the zircon grains were picked by hand under a binocular microscope. These selected zircon grains were mounted on adhesive tapes, enclosed in epoxy resins and polished until their interiors were exposed. For revealing internal structure of polished zircons, cathodoluminescence (CL) images were captured by using a Quanta 400 FEG environmental scanning electron microscope equipped with an Oxford energy dispersive spectroscopy system and a Gatan CL3 $\beta$  detector. These CL images can help to distinguish the origins of these zircons and select suitable grains and places for further isotope analyses.

#### *Zircon U–Pb dating*

Detrital zircon U–Pb isotope analyses were performed by an Agilent 7500a ICP-MS instrument equipped with a 193-nm (wavelength) ArF excimer laser, which operated at a 30  $\mu\text{m}$ -diameter fixed beam with a laser peeling depth of around 20–40  $\mu\text{m}$ . Zircon targets were placed in a sample cell and flushed with Ar and He, and the He was used as the carrier gas. The silicate glass standard NIST 610 was used as an external standard and  $^{29}\text{Si}$  was used as an internal standard to calibrate U, Th, Pb, and trace elements in zircons. The Standard zircon 91500 (Harvard University) was used as an external standard to monitor U–Pb isotope (testing once before and after every 5 analysis), and its reference  $^{206}\text{Pb}/^{238}\text{U}$  value is  $1065.4 \pm 0.6$  Ma (Wiedenbeck et al., 1995). Isotope ratios ( $^{207}\text{Pb}/^{206}\text{Pb}$ ,  $^{206}\text{Pb}/^{238}\text{U}$ ,  $^{207}\text{Pb}/^{235}\text{U}$  and  $^{208}\text{Pb}/^{232}\text{Th}$ ) and element concentrations were calculated by using the GLITTER 4.0 program (Macquarie University). Concordia plots and weighted mean calculations were processed by using the Isoplot (version 4.4, Ludwig, 2003).

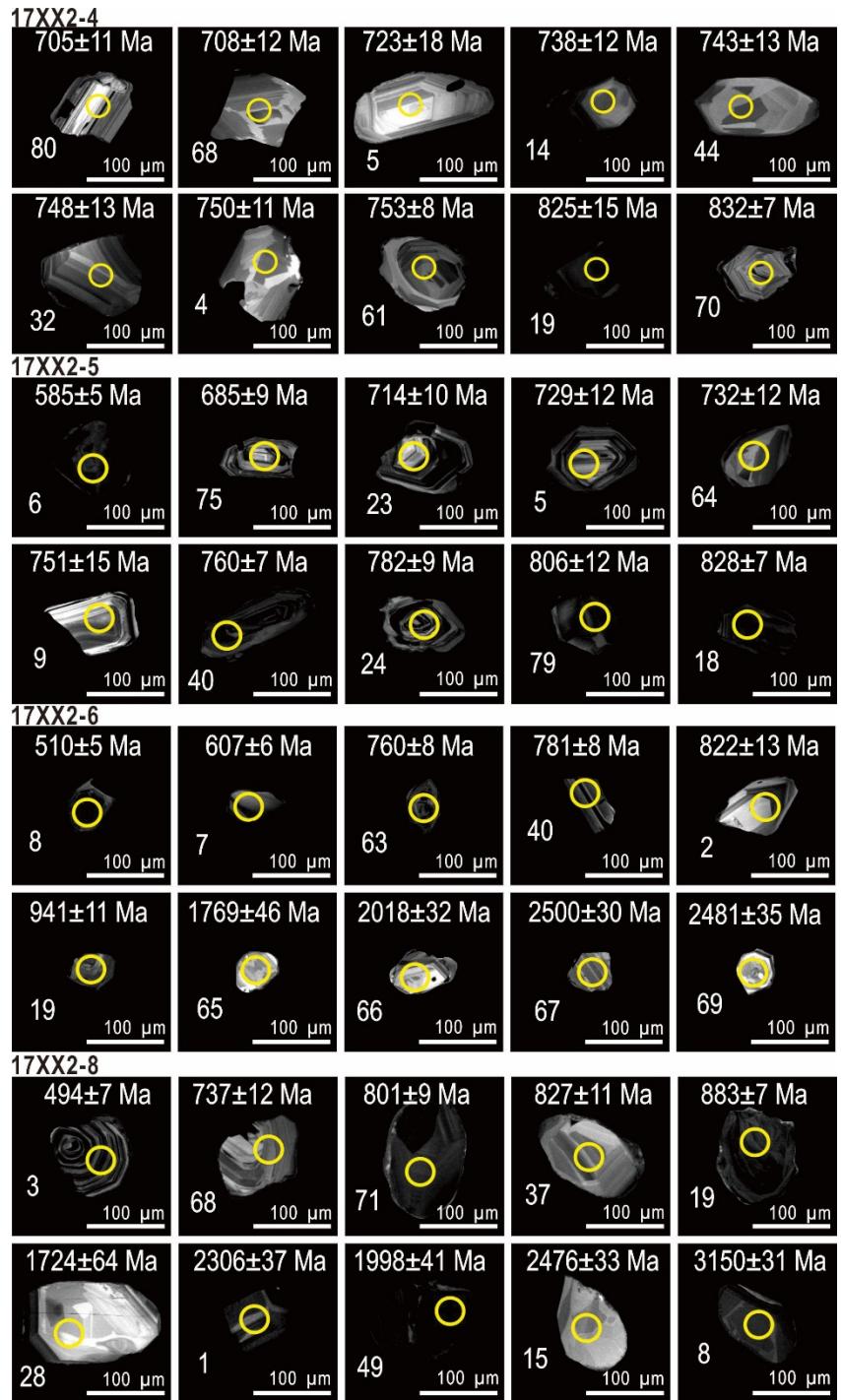
#### *Zircon Hf isotopic analyses*

In-situ zircon Hf isotopic analyses were performed on a Nu Plasma HR multiple collectors (MC)–ICP-MS equipped with a GeoLas 2005 193-nm ArF-excimer laser-ablation system. Hf isotopic analysis was carried out by a 45  $\mu\text{m}$  diameter beam, and 8 Hz at 80 MJ. Analyses were conducted using a spot size of 44 mm and the repetition rate was 10 Hz with the energy density of 15 J/cm<sup>2</sup>. Helium was used as a carrier gas to transport the ablated material with mirror gas nitrogen. Data acquisition for each analysis consists of gas background collection (30s) and signal collection (30s). Standard zircons 91500 and GJ-1 were used as external standards and were analyzed twice before and after every 10 analysis. To check data quality, 91500 and GJ-1 were reanalyzed as unknown samples. Raw count rates for  $^{172}\text{Yb}$ ,  $^{173}\text{Yb}$ ,  $^{175}\text{Lu}$ ,  $^{176}(\text{Hf} + \text{Yb} + \text{Lu})$ ,  $^{177}\text{Hf}$ ,  $^{178}\text{Hf}$ ,  $^{179}\text{Hf}$ , and  $^{180}\text{Hf}$  were collected simultaneously. The isobaric interference of  $^{176}\text{Lu}$  on  $^{176}\text{Hf}$  was corrected by measuring the intensity of an interference-free  $^{175}\text{Lu}$  isotope and a recommended  $^{176}\text{Lu}/^{175}\text{Lu}$  ratio of 0.02669 to calculate  $^{176}\text{Lu}/^{177}\text{Hf}$  (Machado and Simonetti, 2001). Similarly, the interference of  $^{176}\text{Yb}$  on  $^{176}\text{Hf}$  was corrected by measuring an interference-free  $^{172}\text{Yb}$  isotope and using a  $^{176}\text{Yb}/^{172}\text{Yb}$  ratio of 0.5886 to calculate  $^{176}\text{Hf}/^{177}\text{Hf}$ .

(Chu et al., 2002). The data were processed using a decay constant for  $^{176}\text{Lu}$  of  $1.867 \times 10^{-11} \text{ yr}^{-1}$  (Albarède et al., 2006), Single-stage model ages ( $T_{\text{DM}}^1$ ) were calculated with reference to the depleted mantle with a present-day  $^{176}\text{Hf}/^{177}\text{Hf}$  ratio of 0.28325 and a  $^{176}\text{Lu}/^{177}\text{Hf}$  ratio of 0.0384 (Vervoort and Blachert-Toft, 1999). Two-stage model ages ( $T_{\text{DM}}^2$ ) were calculated by projecting the initial  $^{176}\text{Hf}/^{177}\text{Hf}$  values of zircon back to the depleted mantle growth curve using  $^{176}\text{Lu}/^{177}\text{Hf} = 0.015$  for the average continental crust (Rudnick and Gao, 2003).

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**Figure A1**

**Supplementary Table S1** U–Pb dating results for detrital zircons of the late Neoproterozoic, early Cambrian and early Silurian sedimentary rocks from the northwestern margin of the Yangtze Block.

Spot	Th	U	Th/U	Ratio						Age (Ma)							
				No	ppm	$^{207}\text{Pb}/^{206}\text{Pb}$	1σ	$^{207}\text{Pb}/^{235}\text{U}$	1σ	$^{206}\text{Pb}/^{238}\text{U}$	1σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1σ	$^{207}\text{Pb}/^{235}\text{U}$	1σ	$^{206}\text{Pb}/^{238}\text{U}$	1σ
<b>17XX2-4 Sinian Sample</b>																	
17XX2-4-01	45	42	1.07	0.06361	0.00400	1.09526	0.11309	0.12581	0.00224	729	128	751	55	764	13	102	
17XX2-4-02	111	102	1.09	0.06562	0.00223	1.15706	0.06348	0.12314	0.00143	794	70	781	30	749	8	96	
17XX2-4-03	60	61	0.99	0.06491	0.00326	1.18300	0.09871	0.13130	0.00198	772	102	793	46	795	11	100	
17XX2-4-04	55	40	1.35	0.06644	0.00377	1.02669	0.09066	0.12337	0.00197	820	114	717	45	750	11	105	
17XX2-4-05	22	25	0.86	0.06308	0.00675	1.12336	0.19390	0.11876	0.00310	711	213	765	93	723	18	95	
17XX2-4-06	206	66	1.42	0.07711	0.00219	1.32785	0.06234	0.12314	0.00135	1125	55	858	27	749	8	87	
17XX2-4-07	50	73	0.76	0.07453	0.00420	1.30875	0.12454	0.11590	0.00199	1056	110	850	55	707	12	83	
17XX2-4-08	59	73	0.81	0.05963	0.00342	0.96405	0.07598	0.10905	0.00160	590	120	685	39	667	9	97	
17XX2-4-09	111	94	1.18	0.06331	0.00229	1.14020	0.06619	0.12699	0.00151	719	75	773	31	771	9	100	
17XX2-4-10	42	35	1.22	0.06752	0.00693	1.26345	0.22047	0.12907	0.00349	854	199	830	99	783	20	94	
17XX2-4-11	51	43	1.20	0.06803	0.00462	1.10090	0.12348	0.12246	0.00238	870	135	754	60	745	14	99	
17XX2-4-12	36	47	0.76	0.06730	0.00356	1.18673	0.10503	0.12169	0.00182	847	106	794	49	740	10	93	
17XX2-4-13	60	56	1.08	0.06585	0.00477	1.07991	0.12516	0.12012	0.00242	802	145	744	61	731	14	98	
17XX2-4-14	50	52	0.97	0.06687	0.00405	1.23555	0.12603	0.12122	0.00212	834	121	817	57	738	12	90	
17XX2-4-15	33	48	0.69	0.11303	0.00427	2.31931	0.18753	0.14039	0.00204	1849	67	1218	57	847	12	70	
17XX2-4-16	68	74	0.91	0.06143	0.00278	1.16200	0.08438	0.12377	0.00163	654	94	783	40	752	9	96	
17XX2-4-17	30	54	0.56	0.06822	0.00344	1.11554	0.08823	0.12574	0.00183	875	101	761	42	764	11	100	
17XX2-4-18	54	41	1.32	0.06496	0.00435	1.10157	0.11948	0.12206	0.00217	773	135	754	58	742	12	98	
17XX2-4-19	74	55	1.33	0.06347	0.00448	1.27463	0.14915	0.13646	0.00262	724	143	835	67	825	15	99	
17XX2-4-20	31	29	1.08	0.05979	0.00634	1.04577	0.17840	0.12230	0.00320	595	215	727	89	744	18	102	
17XX2-4-21	25	23	1.05	0.06974	0.00605	1.12553	0.16042	0.12967	0.00291	921	169	766	77	786	17	103	
17XX2-4-22	41	39	1.05	0.05633	0.00497	0.97414	0.13454	0.11399	0.00240	465	185	691	69	696	14	101	
17XX2-4-23	26	43	0.60	0.06572	0.00410	0.99737	0.09531	0.12444	0.00205	798	126	703	48	756	12	108	
17XX2-4-24	42	45	0.94	0.07660	0.00417	1.25331	0.11362	0.12597	0.00205	1111	105	825	51	765	12	93	
17XX2-4-25	49	47	1.05	0.06375	0.00395	1.13780	0.11007	0.12208	0.00195	734	126	772	52	743	11	96	
17XX2-4-26	92	159	0.58	0.06302	0.00182	1.05849	0.04731	0.12094	0.00125	709	60	733	23	736	7	100	
17XX2-4-27	7	8	0.83	0.07970	0.01210	1.28320	0.36113	0.12992	0.00455	1190	273	838	161	787	26	94	
17XX2-4-28	39	35	1.13	0.06240	0.00442	1.05638	0.12493	0.12170	0.00218	688	144	732	62	740	13	101	

17XX2-4-29	68	51	1.33	0.06384	0.00434	1.21694	0.13401	0.12251	0.00213	736	138	808	61	745	12	92
17XX2-4-30	76	65	1.16	0.06580	0.00351	1.20215	0.10765	0.12181	0.00190	800	108	802	50	741	11	92
17XX2-4-31	38	127	0.30	0.06515	0.00211	1.20357	0.06310	0.13510	0.00150	779	67	802	29	817	9	102
17XX2-4-32	30	30	1.02	0.06809	0.00492	1.10126	0.13239	0.12303	0.00234	871	143	754	64	748	13	99
17XX2-4-33	16	31	0.52	0.05632	0.00436	0.96778	0.11333	0.12922	0.00230	464	164	687	58	783	13	114
17XX2-4-34	35	31	1.10	0.06028	0.00543	1.05736	0.15318	0.12248	0.00250	614	184	733	76	745	14	102
17XX2-4-35	35	42	0.83	0.05927	0.00371	1.05277	0.10234	0.12907	0.00207	577	131	730	51	783	12	107
17XX2-4-36	33	40	0.83	0.05947	0.00415	0.99217	0.10827	0.12016	0.00215	584	145	700	55	732	12	105
17XX2-4-37	46	36	1.27	0.05609	0.00404	1.09932	0.13157	0.11784	0.00201	456	153	753	64	718	12	95
17XX2-4-38	31	30	1.03	0.06433	0.00540	1.05259	0.14301	0.12258	0.00262	752	168	730	71	745	15	102
17XX2-4-39	61	44	1.39	0.06331	0.00398	1.19539	0.13247	0.12100	0.00203	719	128	799	61	736	12	92
17XX2-4-40	85	63	1.35	0.06277	0.00324	1.06194	0.08728	0.11983	0.00173	700	106	735	43	730	10	99
17XX2-4-41	162	122	1.32	0.06552	0.00245	1.19902	0.07412	0.12130	0.00145	791	77	800	34	738	8	92
17XX2-4-42	34	34	1.01	0.05678	0.00509	1.11934	0.16450	0.12827	0.00271	483	187	763	79	778	15	102
17XX2-4-43	137	219	0.62	0.07105	0.00164	1.44392	0.05619	0.14727	0.00141	959	47	907	23	886	8	98
17XX2-4-44	45	35	1.29	0.06419	0.00478	1.17621	0.14350	0.12207	0.00223	748	150	790	67	743	13	94
17XX2-4-45	61	83	0.74	0.06494	0.00290	1.18317	0.08930	0.12627	0.00171	772	91	793	42	767	10	97
17XX2-4-46	115	112	1.02	0.06313	0.00274	1.16280	0.08336	0.12925	0.00172	713	90	783	39	784	10	100
17XX2-4-47	25	29	0.85	0.07050	0.00641	1.21905	0.19002	0.12951	0.00310	943	176	809	87	785	18	97
17XX2-4-48	34	35	0.98	0.06345	0.00603	1.08214	0.17002	0.12721	0.00307	723	190	745	83	772	18	104
17XX2-4-49	36	42	0.87	0.07881	0.00550	1.26751	0.14838	0.12944	0.00285	1167	132	831	66	785	16	94
17XX2-4-50	63	57	1.10	0.06348	0.00349	1.03068	0.09032	0.12175	0.00179	724	112	719	45	741	10	103
17XX2-4-51	51	71	0.71	0.06778	0.00343	1.19867	0.10029	0.12009	0.00179	862	102	800	46	731	10	91
17XX2-4-52	24	48	0.50	0.06981	0.00357	1.30360	0.12120	0.13538	0.00206	923	102	847	53	819	12	97
17XX2-4-53	21	25	0.83	0.06898	0.00588	1.12568	0.16025	0.12234	0.00262	898	166	766	77	744	15	97
17XX2-4-54	67	80	0.84	0.06572	0.00278	1.11851	0.07755	0.12061	0.00155	798	86	762	37	734	9	96
17XX2-4-55	57	41	1.40	0.06336	0.00413	1.07044	0.11365	0.12145	0.00205	720	133	739	56	739	12	100
17XX2-4-56	57	64	0.89	0.06258	0.00311	1.00103	0.07748	0.12088	0.00167	694	102	704	39	736	10	104
17XX2-4-57	143	138	1.03	0.06084	0.00205	1.02902	0.05366	0.11843	0.00129	634	71	718	27	722	7	100
17XX2-4-58	42	42	1.00	0.06502	0.00398	1.10956	0.11055	0.12573	0.00206	775	124	758	53	764	12	101
17XX2-4-59	64	89	0.71	0.06773	0.00268	1.14116	0.07432	0.12621	0.00157	860	80	773	35	766	9	99
17XX2-4-60	46	39	1.17	0.07306	0.00705	1.16877	0.19090	0.12766	0.00341	1016	184	786	89	775	20	99
17XX2-4-61	165	136	1.21	0.06500	0.00214	1.15379	0.06223	0.12386	0.00136	774	68	779	29	753	8	97
17XX2-4-62	28	28	0.99	0.07799	0.00658	1.46403	0.24164	0.11931	0.00276	1147	159	916	100	727	16	79
17XX2-4-63	67	77	0.87	0.06501	0.00269	1.25734	0.08704	0.13596	0.00170	775	85	827	39	822	10	99
17XX2-4-64	67	52	1.28	0.06309	0.00373	1.03703	0.09723	0.12084	0.00189	711	121	722	48	735	11	102

17XX2-4 Sinian Sample																
17XX2-4-65	54	63	0.86	0.07060	0.00414	1.18477	0.11815	0.12200	0.00213	946	116	794	55	742	12	94
17XX2-4-66	164	256	0.64	0.07351	0.00165	1.41433	0.05312	0.13977	0.00131	1028	45	895	22	843	7	94
17XX2-4-67	86	65	1.31	0.09051	0.00374	1.59297	0.12316	0.12794	0.00182	1436	77	967	48	776	10	80
17XX2-4-68	40	41	0.98	0.06874	0.00462	1.12982	0.13028	0.11607	0.00216	891	133	768	62	708	12	92
17XX2-4-69	38	31	1.23	0.06375	0.00482	1.18394	0.15531	0.12529	0.00230	733	153	793	72	761	13	96
17XX2-4-70	182	213	0.86	0.06578	0.00159	1.19679	0.04685	0.13780	0.00130	800	50	799	22	832	7	104
17XX2-4-71	14	18	0.80	0.07046	0.00651	0.97084	0.14892	0.11099	0.00269	942	179	689	77	679	16	98
17XX2-4-72	79	117	0.67	0.06956	0.00226	1.24139	0.06841	0.13281	0.00148	916	66	820	31	804	8	98
17XX2-4-73	114	97	1.17	0.06795	0.00250	1.02335	0.06077	0.12293	0.00147	867	74	716	30	747	8	104
17XX2-4-74	134	119	1.13	0.06502	0.00226	1.16489	0.06666	0.12500	0.00141	775	71	784	31	759	8	97
17XX2-4-75	37	47	0.80	0.06686	0.00405	1.02737	0.09625	0.12007	0.00188	834	121	718	48	731	11	102
17XX2-4-76	85	67	1.27	0.06691	0.00299	1.25127	0.09366	0.13052	0.00172	835	90	824	42	791	10	96
17XX2-4-77	48	61	0.78	0.06799	0.00336	1.09730	0.08751	0.12096	0.00171	868	99	752	42	736	10	98
17XX2-4-78	62	47	1.34	0.06800	0.00400	1.14821	0.11397	0.12470	0.00198	869	117	776	54	758	11	98
17XX2-4-79	35	37	0.95	0.07095	0.00478	1.28840	0.14891	0.12584	0.00218	956	132	841	66	764	12	91
17XX2-4-80	134	91	1.47	0.06245	0.00365	0.98046	0.09266	0.11552	0.00190	690	120	694	48	705	11	102
17XX2-5 Sinian Sample																
17XX2-5-1	44	31	1.42	0.09227	0.00721	1.89387	0.31966	0.12008	0.00275	1473	142	1079	112	731	16	68
17XX2-5-2	49	44	1.12	0.06823	0.00476	1.03401	0.11493	0.11380	0.00211	876	138	721	57	695	12	96
17XX2-5-3	88	80	1.10	0.06288	0.00336	1.08723	0.09619	0.11852	0.00177	704	110	747	47	722	10	97
17XX2-5-4	63	63	1.01	0.06309	0.00325	1.13405	0.09765	0.11801	0.00161	711	106	770	46	719	9	93
17XX2-5-5	178	116	1.53	0.06725	0.00424	1.08049	0.11214	0.11979	0.00217	846	126	744	55	729	12	98
17XX2-5-6	104	296	0.35	0.06289	0.00162	0.86576	0.03260	0.09503	0.00089	705	54	633	18	585	5	92
17XX2-5-7	93	106	0.88	0.06432	0.00256	1.13247	0.07423	0.12357	0.00150	752	82	769	35	751	9	98
17XX2-5-8	224	233	0.96	0.07083	0.00167	1.41130	0.05631	0.13842	0.00129	953	48	894	24	836	7	94
17XX2-5-9	29	41	0.70	0.06335	0.00544	1.13248	0.15963	0.12354	0.00256	720	172	769	76	751	15	98
17XX2-5-10	73	74	0.99	0.06353	0.00369	1.08354	0.10271	0.11830	0.00187	726	119	745	50	721	11	97
17XX2-5-11	39	37	1.07	0.07167	0.00465	1.30221	0.14611	0.12598	0.00215	977	127	847	64	765	12	90
17XX2-5-12	273	311	0.88	0.06927	0.00144	1.23798	0.04029	0.12644	0.00110	907	42	818	18	768	6	94
17XX2-5-13	77	69	1.12	0.06421	0.00336	0.92734	0.07483	0.11638	0.00173	749	107	666	39	710	10	107
17XX2-5-14	119	110	1.07	0.07423	0.00395	1.31455	0.12147	0.13502	0.00220	1048	104	852	53	816	12	96
17XX2-5-15	40	43	0.93	0.06336	0.00580	1.20484	0.18862	0.12776	0.00296	721	183	803	87	775	17	97
17XX2-5-16	82	87	0.95	0.06656	0.00288	1.12443	0.07972	0.12246	0.00160	824	88	765	38	745	9	97
17XX2-5-17	240	186	1.29	0.06644	0.00190	1.12511	0.05171	0.12018	0.00121	820	59	765	25	732	7	96
17XX2-5-18	163	267	0.61	0.07023	0.00171	1.41670	0.05846	0.13710	0.00130	935	49	896	25	828	7	92
17XX2-5-19	112	158	0.71	0.06704	0.00201	1.25951	0.06363	0.12769	0.00133	839	61	828	29	775	8	94

17XX2-5-20	188	135	1.39	0.06667	0.00233	1.12122	0.06147	0.11942	0.00136	828	71	764	29	727	8	95	
17XX2-5-21	88	89	0.99	0.07014	0.00288	1.13018	0.07555	0.11773	0.00148	933	82	768	36	718	9	93	
17XX2-5-22	99	94	1.05	0.06656	0.00251	1.17498	0.07424	0.12187	0.00144	824	77	789	35	741	8	94	
17XX2-5-23	47	59	0.80	0.06145	0.00341	1.01746	0.08982	0.11716	0.00171	655	115	713	45	714	10	100	
17XX2-5-24	101	97	1.04	0.05996	0.00245	1.12286	0.07465	0.12892	0.00154	602	86	764	36	782	9	102	
17XX2-5-25	47	49	0.96	0.06933	0.00386	1.16662	0.10975	0.11827	0.00182	909	111	785	51	721	10	92	
17XX2-5-26	70	76	0.92	0.06775	0.00295	1.22155	0.09284	0.11657	0.00152	861	88	811	42	711	9	88	
17XX2-5-27	93	67	1.39	0.07061	0.00345	1.17181	0.09654	0.12145	0.00177	946	97	788	45	739	10	94	
17XX2-5-28	114	109	1.05	0.06337	0.00237	1.11360	0.06833	0.12367	0.00145	721	77	760	33	752	8	99	
17XX2-5-29	32	40	0.79	0.06956	0.00442	1.12585	0.12110	0.11901	0.00204	915	126	766	58	725	12	95	
17XX2-5-30	173	116	1.49	0.07001	0.00332	1.25466	0.10213	0.12492	0.00182	929	94	826	46	759	10	92	
17XX2-5-31	65	77	0.85	0.06641	0.00306	1.05910	0.07833	0.11718	0.00156	819	93	733	39	714	9	97	
17XX2-5-32	481	391	1.23	0.06137	0.00194	0.93095	0.04423	0.09962	0.00102	652	67	668	23	612	6	92	
17XX2-5-33	42	49	0.85	0.06241	0.00366	1.09292	0.11093	0.12114	0.00190	688	121	750	54	737	11	98	
17XX2-5-34	133	149	0.90	0.06302	0.00212	1.11391	0.05947	0.12070	0.00129	709	70	760	29	735	7	97	
17XX2-5-35	908	587	1.55	0.06592	0.00267	0.73895	0.04325	0.07427	0.00092	804	83	562	25	462	6	82	
17XX2-5-36	80	77	1.05	0.06508	0.00288	1.13929	0.08508	0.11718	0.00153	777	90	772	40	714	9	93	
17XX2-5-37	93	92	1.02	0.06512	0.00272	1.11751	0.07729	0.12119	0.00152	778	86	762	37	737	9	97	
17XX2-5-38	173	290	0.60	0.07083	0.00162	1.17797	0.04228	0.11807	0.00107	953	46	790	20	719	6	91	
17XX2-5-39	39	41	0.95	0.07184	0.00411	1.12512	0.10292	0.12434	0.00200	981	112	765	49	756	11	99	
17XX2-5-40	90	277	0.33	0.06524	0.00159	1.15063	0.04446	0.12514	0.00115	782	50	778	21	760	7	98	
17XX2-5-41	170	249	0.68	0.06751	0.00160	1.25370	0.04773	0.13842	0.00127	854	48	825	22	836	7	101	
17XX2-5-42	97	103	0.94	0.06843	0.00248	1.27137	0.07848	0.12807	0.00148	882	73	833	35	777	8	93	
17XX2-5-43	101	84	1.20	0.07063	0.00353	1.07163	0.08728	0.11298	0.00172	947	99	740	43	690	10	93	
17XX2-5-44	63	57	1.10	0.07153	0.00337	1.22758	0.09977	0.12436	0.00175	973	93	813	45	756	10	93	
17XX2-5-45	104	96	1.08	0.06507	0.00262	1.12124	0.07592	0.11847	0.00146	777	83	764	36	722	8	95	
17XX2-5-46	227	206	1.10	0.07458	0.00184	1.26677	0.05094	0.11679	0.00110	1057	49	831	23	712	6	86	
17XX2-5-47	208	208	1.00	0.06976	0.00181	1.29090	0.05514	0.13802	0.00133	921	53	842	24	834	8	99	
17XX2-5-48	68	80	0.85	0.08498	0.00319	1.50935	0.10456	0.11611	0.00145	1315	71	934	42	708	8	76	
17XX2-5-49	89	96	0.92	0.06485	0.00278	1.15147	0.08085	0.12064	0.00153	770	88	778	38	734	9	94	
17XX2-5-50	33	52	0.64	0.06981	0.00383	1.45621	0.14517	0.14010	0.00218	923	109	912	60	845	12	93	
17XX2-5-51	267	246	1.08	0.06511	0.00192	1.14379	0.05502	0.11924	0.00122	778	61	774	26	726	7	94	
17XX2-5-52	84	75	1.12	0.07051	0.00374	1.17097	0.10543	0.11944	0.00190	943	105	787	49	727	11	92	
17XX2-5-53	90	99	0.90	0.06504	0.00260	1.11100	0.07252	0.12088	0.00146	776	82	759	35	736	8	97	
17XX2-5-54	204	194	1.05	0.06657	0.00337	1.13373	0.09561	0.12188	0.00183	824	102	770	46	741	11	96	
17XX2-5-55	26	31	0.83	0.06953	0.00512	1.20745	0.15629	0.11427	0.00212	915	144	804	72	698	12	87	

17XX2-5-56	462	397	1.16	0.06689	0.00191	1.17577	0.05498	0.12049	0.00122	835	58	789	26	733	7	93			
17XX2-5-57	71	62	1.15	0.06494	0.00329	1.15910	0.09775	0.11952	0.00166	773	103	782	46	728	10	93			
17XX2-5-58	42	63	0.67	0.06873	0.00363	1.21730	0.11207	0.12671	0.00195	891	105	809	51	769	11	95			
17XX2-5-59	112	104	1.07	0.06378	0.00241	1.04354	0.06211	0.11792	0.00135	734	78	726	31	719	8	99			
17XX2-5-60	131	107	1.22	0.06082	0.00248	1.17493	0.07826	0.12356	0.00146	633	86	789	37	751	8	95			
17XX2-5-61	134	96	1.39	0.06371	0.00273	1.08906	0.07491	0.11932	0.00147	732	88	748	36	727	8	97			
17XX2-5-62	210	189	1.11	0.06351	0.00248	1.18565	0.07761	0.12121	0.00147	725	81	794	36	738	8	93			
17XX2-5-63	100	67	1.50	0.06045	0.00364	1.11282	0.11654	0.11401	0.00188	620	125	760	56	696	11	92			
17XX2-5-64	48	42	1.16	0.05666	0.00400	0.95662	0.10567	0.12016	0.00203	478	150	682	55	732	12	107			
17XX2-5-65	38	34	1.14	0.06184	0.00471	1.11263	0.14576	0.11502	0.00212	669	155	759	70	702	12	92			
17XX2-5-66	67	66	1.01	0.06827	0.00327	1.20856	0.10059	0.12198	0.00172	877	96	805	46	742	10	92			
17XX2-5-67	96	88	1.08	0.06630	0.00277	1.16946	0.08099	0.12069	0.00152	816	85	786	38	735	9	93			
17XX2-5-68	182	198	0.92	0.06482	0.00267	0.97988	0.06377	0.11157	0.00142	768	84	694	33	682	8	98			
17XX2-5-69	59	59	1.00	0.06462	0.00574	1.08669	0.16205	0.11468	0.00250	762	177	747	79	700	14	94			
17XX2-5-70	81	61	1.32	0.07400	0.00361	1.33585	0.11769	0.11352	0.00162	1041	95	861	51	693	9	80			
17XX2-5-71	216	198	1.09	0.06416	0.00187	0.99813	0.04520	0.10902	0.00108	747	60	703	23	667	6	95			
17XX2-5-72	114	119	0.96	0.06236	0.00300	1.00581	0.07712	0.11361	0.00157	686	99	707	39	694	9	98			
17XX2-5-73	171	267	0.64	0.06401	0.00156	1.15736	0.04488	0.12805	0.00116	742	51	781	21	777	7	99			
17XX2-5-74	84	76	1.11	0.06208	0.00348	1.13632	0.10413	0.12364	0.00183	677	115	771	49	752	11	97			
17XX2-5-75	73	65	1.13	0.06664	0.00315	1.06596	0.08241	0.11209	0.00153	827	96	737	41	685	9	93			
17XX2-5-76	82	113	0.73	0.06091	0.00235	1.08192	0.06743	0.12030	0.00139	636	81	745	33	732	8	98			
17XX2-5-77	96	86	1.12	0.06275	0.00416	1.06562	0.11703	0.11157	0.00202	700	135	737	58	682	12	93			
17XX2-5-78	108	117	0.92	0.06144	0.00236	1.03227	0.06460	0.11735	0.00136	655	80	720	32	715	8	99			
17XX2-5-79	44	50	0.87	0.05331	0.00382	1.23600	0.15186	0.13315	0.00202	342	154	817	69	806	12	99			
17XX2-5-80	159	162	0.98	0.09725	0.00260	1.67778	0.08166	0.12014	0.00127	1572	49	1000	31	731	7	137			
17XX2-6 Early Cambrian Sample																			
17XX2-6-1	167	262	0.64	0.06568	0.00156	1.10607	0.04201	0.13224	0.0012	796	49	756	20	801	7	106			
17XX2-6-2	73	39	1.88	0.07495	0.00451	1.17616	0.12376	0.13604	0.00234	1067	117	790	58	822	13	104			
17XX2-6-3	194	160	1.21	0.11882	0.00216	4.64222	0.22109	0.30528	0.00281	1939	32	1757	40	1717	14	113			
17XX2-6-4	48	68	0.70	0.07295	0.00347	1.1822	0.0962	0.13423	0.0019	1013	94	792	45	812	11	102			
17XX2-6-5	50	62	0.80	0.08101	0.00401	1.53544	0.14386	0.13251	0.002	1222	94	945	58	802	11	85			
17XX2-6-6	360	244	1.47	0.16774	0.00216	9.81065	0.32427	0.45244	0.00362	2535	21	2417	30	2406	16	105			
17XX2-6-7	136	158	0.86	0.06351	0.00231	0.77433	0.04184	0.09873	0.0011	725	75	582	24	607	6	104			
17XX2-6-8	373	389	0.96	0.06751	0.00196	0.72083	0.02991	0.08235	0.00082	854	59	551	18	510	5	93			
17XX2-6-9	295	262	1.12	0.16783	0.00237	9.93637	0.40933	0.46575	0.00399	2536	24	2429	38	2465	18	103			
17XX2-6-10	274	258	1.06	0.06247	0.00185	0.7538	0.03233	0.09561	0.00095	690	62	570	19	589	6	103			

17XX2-6-11	81	79	1.03	0.06925	0.00308	1.07376	0.07843	0.12502	0.00167	906	89	741	38	759	10	103
17XX2-6-12	55	60	0.91	0.1376	0.00596	6.90197	1.05481	0.38795	0.00778	2197	73	2099	136	2113	36	104
17XX2-6-13	112	280	0.40	0.0691	0.00176	1.26898	0.05419	0.13892	0.00133	902	52	832	24	839	8	101
17XX2-6-14	145	93	1.55	0.0766	0.00282	1.33549	0.08759	0.13818	0.00169	1111	72	861	38	834	10	97
17XX2-6-15	334	304	1.10	0.11215	0.0016	4.59919	0.1405	0.32615	0.00261	1835	26	1749	25	1820	13	101
17XX2-6-16	139	161	0.86	0.06783	0.00198	1.16275	0.05708	0.13422	0.00138	863	59	783	27	812	8	104
17XX2-6-17	50	41	1.21	0.05481	0.00477	0.76458	0.0931	0.12306	0.0023	404	184	577	54	748	13	130
17XX2-6-18	139	186	0.75	0.12801	0.00216	6.98859	0.35136	0.38643	0.00353	2071	29	2110	45	2106	16	98
17XX2-6-19	101	132	0.76	0.07866	0.00282	1.53754	0.10251	0.15725	0.00196	1164	69	946	41	942	11	100
17XX2-6-20	182	114	1.59	0.07175	0.00293	1.17288	0.08206	0.12198	0.00158	979	81	788	38	742	9	94
17XX2-6-21	186	133	1.40	0.16629	0.00307	10.87072	0.75058	0.47354	0.00499	2521	31	2512	64	2499	22	101
17XX2-6-22	171	171	1.00	0.06813	0.00208	1.07067	0.05302	0.12007	0.00125	873	62	739	26	731	7	99
17XX2-6-23	62	116	0.53	0.1691	0.0026	9.55483	0.46262	0.43945	0.004	2549	26	2393	45	2348	18	109
17XX2-6-24	34	34	1.00	0.17015	0.00412	11.09595	1.21062	0.47689	0.0063	2559	40	2531	102	2514	28	102
17XX2-6-25	677	429	1.58	0.06119	0.0015	0.78672	0.02784	0.09741	0.00088	646	52	589	16	599	5	102
17XX2-6-26	88	109	0.81	0.12809	0.00342	6.75367	0.6005	0.3869	0.00497	2072	46	2080	79	2108	23	98
17XX2-6-27	140	169	0.83	0.0751	0.00265	1.41637	0.08983	0.1412	0.00169	1071	69	896	38	852	10	95
17XX2-6-28	49	84	0.58	0.06727	0.00282	1.2434	0.09165	0.14224	0.00182	846	85	820	41	857	10	104
17XX2-6-29	140	110	1.28	0.06922	0.00267	1.16461	0.07683	0.12903	0.0016	905	78	784	36	782	9	100
17XX2-6-30	112	114	0.98	0.06981	0.00249	1.1025	0.06449	0.13093	0.00152	923	72	755	31	793	9	105
17XX2-6-31	226	128	1.76	0.0678	0.00236	1.17135	0.06893	0.13702	0.00157	862	71	787	32	828	9	105
17XX2-6-32	233	149	1.56	0.06657	0.00219	1.15941	0.06367	0.13512	0.00148	824	67	782	30	817	8	105
17XX2-6-33	162	240	0.67	0.07181	0.00171	1.44153	0.06025	0.14851	0.00138	981	48	906	25	893	8	98
17XX2-6-34	79	58	1.35	0.06729	0.0039	1.18233	0.11576	0.13439	0.0022	847	116	792	54	813	12	103
17XX2-6-35	60	64	0.94	0.10973	0.00321	5.23251	0.46338	0.32033	0.00403	1795	52	1858	75	1791	20	100
17XX2-6-36	152	240	0.63	0.06666	0.00168	1.28044	0.05419	0.14082	0.00132	827	52	837	24	849	7	101
17XX2-6-37	24	58	0.42	0.08123	0.00392	1.86239	0.18274	0.17556	0.0028	1227	92	1068	65	1043	15	118
17XX2-6-38	83	94	0.88	0.07042	0.00251	1.39777	0.0941	0.14932	0.00177	941	71	888	40	897	10	101
17XX2-6-39	74	73	1.01	0.07199	0.00341	1.17154	0.09444	0.12853	0.00185	986	94	787	44	780	11	99
17XX2-6-40	212	155	1.37	0.06915	0.00232	1.14931	0.06403	0.12881	0.00145	903	68	777	30	781	8	101
17XX2-6-41	168	300	0.56	0.1698	0.00268	11.0904	0.60392	0.47175	0.00444	2556	26	2531	51	2491	19	103
17XX2-6-42	59	64	0.93	0.06437	0.00374	1.0953	0.10689	0.12197	0.00194	754	118	751	52	742	11	99
17XX2-6-43	92	104	0.88	0.06243	0.00244	1.16499	0.07628	0.13482	0.00162	689	81	784	36	815	9	104
17XX2-6-44	95	85	1.11	0.06899	0.00282	1.31234	0.09467	0.14422	0.00186	898	82	851	42	869	10	102
17XX2-6-45	50	148	0.34	0.15925	0.00254	10.06003	0.53579	0.44634	0.00415	2448	27	2440	49	2379	19	97
17XX2-6-46	107	81	1.33	0.06634	0.00302	1.17182	0.08994	0.13692	0.00187	817	92	788	42	827	11	105

17XX2-6-47	5	11	0.50	0.15527	0.0072	6.98671	1.27215	0.38967	0.00866	2405	77	2110	162	2121	40	113
17XX2-6-48	100	203	0.49	0.07641	0.00182	1.78421	0.08046	0.17179	0.00164	1106	47	1040	29	1022	9	108
17XX2-6-49	191	181	1.05	0.06301	0.00233	1.15449	0.07058	0.13704	0.00159	709	77	779	33	828	9	106
17XX2-6-50	105	76	1.38	0.06655	0.0039	1.18602	0.11918	0.13711	0.00235	824	118	794	55	828	13	104
17XX2-6-51	120	232	0.52	0.06963	0.00199	1.2412	0.05973	0.12879	0.00131	918	58	819	27	781	8	95
17XX2-6-52	274	257	1.07	0.07014	0.00192	1.3807	0.06655	0.15639	0.00159	932	55	881	28	937	9	106
17XX2-6-53	184	283	0.65	0.16023	0.00197	10.44646	0.33763	0.45594	0.00357	2458	21	2475	30	2422	16	102
17XX2-6-54	275	383	0.72	0.16145	0.00203	10.20386	0.34762	0.44342	0.00352	2471	21	2453	32	2366	16	104
17XX2-6-55	209	198	1.05	0.06838	0.00196	1.27374	0.06327	0.13533	0.00138	880	58	834	28	818	8	98
17XX2-6-56	105	96	1.10	0.07112	0.00261	1.42466	0.09382	0.14513	0.00176	961	73	899	39	874	10	97
17XX2-6-57	7	48	0.15	0.11827	0.00376	5.27801	0.53779	0.28565	0.00399	1930	56	1865	87	1620	20	119
17XX2-6-58	17	14	1.26	0.07034	0.00822	1.18173	0.22108	0.13751	0.00403	938	223	792	103	831	23	105
17XX2-6-59	197	365	0.54	0.05687	0.00169	0.66346	0.02803	0.08262	0.00081	486	65	517	17	512	5	99
17XX2-6-60	89	53	1.67	0.07046	0.00387	1.20982	0.11355	0.12623	0.00199	942	109	805	52	766	11	95
17XX2-6-61	143	139	1.03	0.0639	0.00224	1.21161	0.07264	0.13291	0.00151	738	73	806	33	804	9	100
17XX2-6-62	39	77	0.51	0.0714	0.00356	1.25132	0.11205	0.13049	0.002	969	99	824	51	791	11	96
17XX2-6-63	197	202	0.97	0.06442	0.0023	1.13978	0.06791	0.12508	0.00145	756	74	772	32	760	8	98
17XX2-6-64	209	285	0.74	0.06707	0.00174	1.13887	0.04877	0.12652	0.00122	840	53	772	23	768	7	99
17XX2-6-65	41	62	0.66	0.10816	0.00276	5.14624	0.40269	0.31677	0.00365	1769	46	1844	67	1774	18	100
17XX2-6-66	95	107	0.89	0.12426	0.00224	6.81467	0.3787	0.37552	0.00358	2018	32	2088	49	2055	17	98
17XX2-6-67	97	77	1.26	0.16425	0.00292	10.68584	0.71198	0.47013	0.00483	2500	30	2496	62	2484	21	101
17XX2-6-68	86	88	0.98	0.06427	0.0029	1.42439	0.11963	0.14204	0.00195	751	93	899	50	856	11	95
17XX2-6-69	39	67	0.58	0.16244	0.00346	10.59054	0.87655	0.46653	0.00557	2481	35	2488	77	2468	24	101
17XX2-6-70	63	60	1.04	0.17022	0.00373	11.75736	1.06174	0.48501	0.00606	2560	36	2585	85	2549	26	100
17XX2-6-71	217	263	0.83	0.06423	0.00219	1.13057	0.06471	0.12064	0.00135	749	70	768	31	734	8	96
17XX2-6-72	228	305	0.75	0.06945	0.00145	1.52808	0.05688	0.161	0.00141	912	43	942	23	962	8	102
17XX2-6-73	102	92	1.11	0.0623	0.0027	1.19432	0.08931	0.12692	0.00163	685	90	798	41	770	9	97
17XX2-6-74	136	181	0.75	0.06719	0.00182	1.45375	0.07125	0.15253	0.00152	844	55	911	29	915	8	100
17XX2-6-75	91	74	1.23	0.06146	0.00328	1.04298	0.09125	0.11955	0.00179	655	110	725	45	728	10	100
17XX2-6-76	165	253	0.65	0.17147	0.00227	12.14643	0.50763	0.49637	0.00416	2572	22	2616	39	2598	18	99
17XX2-6-77	61	50	1.22	0.05966	0.00407	0.9853	0.1058	0.11852	0.00206	591	141	696	54	722	12	104
17XX2-6-78	125	101	1.24	0.07106	0.00264	1.34316	0.09013	0.13467	0.00167	959	74	865	39	814	10	94
17XX2-6-79	15	42	0.36	0.0734	0.00471	1.79441	0.23617	0.16544	0.00328	1025	125	1043	86	987	18	95
17XX2-6-80	169	95	1.78	0.10502	0.00237	4.79308	0.30188	0.29841	0.00312	1715	41	1784	53	1683	15	102
N0.81	79	93	0.85	0.06941	0.00160	1.21209	0.02746	0.12665	0.00151	911	47	806	13	769	9	95
N0.82	59	70	0.84	0.06910	0.00146	1.15260	0.02409	0.12098	0.00141	902	43	779	11	736	8	95

N0.83	146	223	0.66	0.06614	0.00094	1.17088	0.01677	0.12840	0.00139	811	29	787	8	779	8	99
N0.84	128	344	0.37	0.07333	0.00094	1.66078	0.02157	0.16427	0.00177	1023	26	994	8	981	10	99
N0.85	49	392	0.12	0.16161	0.00163	8.37703	0.08817	0.37595	0.00398	2473	17	2273	10	2057	19	91
N0.86	132	121	1.09	0.08534	0.00839	2.14306	0.20578	0.18213	0.00500	1323	180	1163	66	1079	27	93
N0.87	60	57	1.06	0.10672	0.00149	4.46077	0.06267	0.30318	0.00337	1744	25	1724	12	1707	17	99
N0.88	56	69	0.80	0.06881	0.00167	1.12620	0.02686	0.11871	0.00144	893	49	766	13	723	8	94
N0.89	199	142	1.40	0.16174	0.00183	9.51092	0.11067	0.42650	0.00463	2474	19	2389	11	2290	21	96
N0.90	103	96	1.07	0.06823	0.00185	1.11510	0.02962	0.11854	0.00149	876	55	761	14	722	9	95
N0.91	195	183	1.07	0.16248	0.00178	9.56087	0.10830	0.42682	0.00461	2482	18	2393	10	2291	21	96
N0.92	90	161	0.56	0.10904	0.00273	4.56339	0.11196	0.30356	0.00406	1783	45	1743	20	1709	20	98
N0.93	66	73	0.91	0.07495	0.00528	1.35344	0.09244	0.13099	0.00294	1067	135	869	40	794	17	91
N0.94	18	41	0.44	0.06581	0.00870	1.15495	0.14979	0.12730	0.00395	800	255	780	71	773	23	99
N0.95	101	79	1.28	0.07297	0.00157	1.17933	0.02500	0.11723	0.00139	1013	43	791	12	715	8	90
N0.96	57	58	1.00	0.06299	0.00297	1.00621	0.04640	0.11587	0.00185	708	97	707	23	707	11	100
N0.97	42	38	1.11	0.06837	0.00396	1.10751	0.06242	0.11751	0.00219	880	115	757	30	716	13	95
<b>17XX2-8 Early Silurian Sample</b>																
17XX2-8-1	37	52	0.71	0.14654	0.00319	9.00907	0.73028	0.42616	0.00505	2306	37	2339	74	2288	23	101
17XX2-8-2	38	38	0.99	0.06708	0.00405	1.09917	0.10951	0.12285	0.00201	840	121	753	53	747	12	99
17XX2-8-3	99	188	0.53	0.05753	0.00326	0.69366	0.05646	0.0797	0.00123	512	120	535	34	494	7	92
17XX2-8-4	47	66	0.71	0.06573	0.00292	1.32007	0.09995	0.14327	0.0019	798	90	855	44	863	11	101
17XX2-8-5	109	168	0.65	0.06208	0.00243	0.6689	0.03637	0.07324	0.00087	677	82	520	22	456	5	88
17XX2-8-6	106	124	0.86	0.10741	0.00198	4.78462	0.22804	0.30108	0.00286	1756	33	1782	40	1697	14	103
17XX2-8-7	98	159	0.62	0.15599	0.00234	10.23071	0.49395	0.43581	0.00403	2413	25	2456	45	2332	18	103
17XX2-8-8	52	46	1.14	0.24462	0.00477	21.66859	2.24872	0.63268	0.00839	3150	31	3169	101	3160	33	100
17XX2-8-9	88	72	1.22	0.16057	0.00355	10.36465	0.87894	0.46905	0.00583	2462	37	2468	79	2479	26	99
17XX2-8-10	117	88	1.34	0.06182	0.00249	1.12326	0.07546	0.12493	0.00154	668	84	765	36	759	9	99
17XX2-8-11	33	63	0.52	0.16056	0.00326	10.24909	0.81194	0.44618	0.00514	2462	34	2458	73	2378	23	104
17XX2-8-12	35	34	1.05	0.05825	0.00465	1.01172	0.12906	0.1217	0.00233	539	166	710	65	740	13	104
17XX2-8-13	37	32	1.17	0.16163	0.00491	10.40639	1.37592	0.46361	0.00755	2473	50	2472	122	2456	33	101
17XX2-8-14	70	52	1.35	0.06177	0.00353	1.07079	0.09877	0.11959	0.00185	666	118	739	48	728	11	99
17XX2-8-15	37	52	0.72	0.16198	0.00321	10.31683	0.81186	0.44773	0.00507	2476	33	2464	73	2385	23	104
17XX2-8-16	114	157	0.72	0.11692	0.0019	5.68029	0.24058	0.34507	0.00313	1910	29	1928	37	1911	15	100
17XX2-8-17	183	163	1.13	0.11141	0.0019	5.23721	0.23306	0.32869	0.00304	1823	31	1859	38	1832	15	99
17XX2-8-18	206	466	0.44	0.15508	0.00206	8.71638	0.30763	0.36511	0.0031	2403	22	2309	32	2006	15	120
17XX2-8-19	137	508	0.27	0.07058	0.0013	1.47528	0.04429	0.14686	0.00126	945	37	920	18	883	7	96
17XX2-8-20	29	57	0.51	0.06444	0.0046	1.26349	0.15607	0.12611	0.00243	756	144	830	70	766	14	92

17XX2-8-21	21	34	0.61	0.06132	0.0041	1.35902	0.16735	0.13617	0.00245	650	137	871	72	823	14	94
17XX2-8-22	51	52	0.99	0.11892	0.00249	5.8204	0.3585	0.35439	0.00376	1940	37	1950	53	1956	18	99
17XX2-8-23	55	91	0.60	0.07168	0.00245	1.51365	0.0921	0.15874	0.00186	977	68	936	37	950	10	101
17XX2-8-24	86	133	0.65	0.06495	0.00249	1.11421	0.06928	0.13136	0.00161	773	79	760	33	796	9	105
17XX2-8-25	115	92	1.25	0.06371	0.00318	1.14478	0.09636	0.11612	0.0017	732	102	775	46	708	10	91
17XX2-8-26	89	125	0.71	0.06795	0.00224	1.31244	0.07439	0.13603	0.00153	867	67	851	33	822	9	97
17XX2-8-27	78	106	0.74	0.16017	0.00259	10.27296	0.57111	0.46104	0.0045	2457	27	2460	51	2444	20	101
17XX2-8-28	30	27	1.13	0.10553	0.00379	4.50791	0.48654	0.30897	0.00454	1724	64	1732	90	1736	22	99
17XX2-8-29	99	81	1.22	0.06669	0.00259	1.20114	0.07861	0.13792	0.00169	828	79	801	36	833	10	104
17XX2-8-30	12	17	0.72	0.06117	0.00679	1.14231	0.21446	0.13185	0.00321	645	222	774	102	798	18	103
17XX2-8-31	144	137	1.05	0.06821	0.00194	1.52854	0.07823	0.15757	0.00164	875	58	942	31	943	9	100
17XX2-8-32	96	90	1.06	0.06207	0.00274	1.04079	0.07347	0.12125	0.00157	677	92	724	37	738	9	102
17XX2-8-33	38	93	0.41	0.06826	0.00235	1.49102	0.09375	0.15371	0.00178	876	70	927	38	922	10	99
17XX2-8-34	13	43	0.31	0.00617	0.00728	0.08109	0.09585	0.1045	0.00183	0	0	79	90	641	11	101
17XX2-8-35	32	66	0.48	0.07329	0.0031	1.71882	0.14373	0.17094	0.00236	1022	83	1016	54	1017	13	100
17XX2-8-36	56	48	1.17	0.06022	0.00311	1.16807	0.09891	0.1361	0.00188	611	108	786	46	823	11	105
17XX2-8-37	56	66	0.85	0.06515	0.00304	1.33692	0.10711	0.13683	0.00186	779	95	862	47	827	11	96
17XX2-8-38	24	39	0.62	0.07012	0.00446	1.33466	0.1469	0.13033	0.00228	932	125	861	64	790	13	92
17XX2-8-39	96	41	2.32	0.10899	0.00404	5.33888	0.63307	0.33098	0.00521	1783	66	1875	101	1843	25	97
17XX2-8-40	63	72	0.87	0.06759	0.00289	1.19698	0.08693	0.1327	0.00175	856	86	799	40	803	10	101
17XX2-8-41	31	32	0.97	0.07131	0.00475	1.39626	0.17516	0.12744	0.00236	966	130	887	74	773	13	87
17XX2-8-42	58	58	1.01	0.07164	0.00344	1.34433	0.11466	0.13267	0.00193	976	95	865	50	803	11	93
17XX2-8-43	65	156	0.42	0.24606	0.0032	22.28946	1.11485	0.63035	0.00576	3160	20	3196	49	3151	23	100
17XX2-8-44	36	68	0.53	0.24057	0.00343	22.08056	1.45852	0.62215	0.00613	3124	23	3187	64	3119	24	100
17XX2-8-45	37	50	0.74	0.06636	0.00403	1.14877	0.11533	0.11938	0.00191	818	122	777	55	727	11	94
17XX2-8-46	55	58	0.94	0.06732	0.0051	1.04099	0.12771	0.12176	0.00253	848	150	724	64	741	15	102
17XX2-8-47	39	33	1.18	0.07301	0.00516	1.30317	0.17057	0.11659	0.00221	1014	137	847	75	711	13	84
17XX2-8-48	50	66	0.75	0.06334	0.00309	1.06155	0.08647	0.11869	0.00166	720	100	735	43	723	10	98
17XX2-8-49	43	51	0.85	0.12283	0.00289	6.05842	0.47155	0.35265	0.00406	1998	41	1984	68	1947	19	103
17XX2-8-50	94	141	0.66	0.07523	0.00292	1.27896	0.08546	0.12622	0.00164	1075	76	836	38	766	9	92
17XX2-8-51	207	361	0.57	0.05744	0.00151	0.6958	0.02547	0.08257	0.00078	508	57	536	15	511	5	95
17XX2-8-52	48	43	1.13	0.06522	0.00355	1.31662	0.12678	0.13704	0.00213	781	110	853	56	828	12	97
17XX2-8-53	55	68	0.81	0.06318	0.00302	1.05704	0.08168	0.12128	0.00168	715	98	732	40	738	10	101
17XX2-8-54	80	94	0.86	0.1274	0.00257	6.51388	0.40882	0.37008	0.00389	2062	35	2048	55	2030	18	102
17XX2-8-55	23	39	0.58	0.0682	0.00424	1.27742	0.14562	0.11812	0.00198	875	124	836	65	720	11	86
17XX2-8-56	20	21	0.94	0.05443	0.00643	1.19605	0.24191	0.1324	0.00306	389	245	799	112	802	17	100

17XX2-8-57	30	32	0.92	0.0691	0.00535	1.1798	0.15553	0.11751	0.00221	902	152	791	72	716	13	91
17XX2-8-58	35	34	1.03	0.06155	0.00496	1.04165	0.13569	0.12682	0.00254	659	164	725	67	770	15	106
17XX2-8-59	35	39	0.89	0.15685	0.00534	9.71838	1.35486	0.45631	0.00806	2422	57	2408	128	2423	36	100
17XX2-8-60	39	73	0.52	0.1642	0.00272	9.56756	0.5549	0.448	0.00442	2499	28	2394	53	2386	20	105
17XX2-8-61	53	64	0.83	0.06669	0.00347	1.00476	0.08209	0.12093	0.00178	828	105	706	42	736	10	104
17XX2-8-62	38	51	0.76	0.07145	0.00346	1.58108	0.15225	0.13536	0.00203	970	96	963	60	818	12	85
17XX2-8-63	83	135	0.61	0.06869	0.00207	1.43172	0.07697	0.14106	0.00151	889	61	902	32	851	9	94
17XX2-8-64	28	31	0.89	0.1438	0.0044	7.47605	0.83088	0.37912	0.00569	2274	52	2170	100	2072	27	110
17XX2-8-65	31	51	0.61	0.0726	0.00367	1.12237	0.09667	0.12064	0.00183	1003	99	764	46	734	11	96
17XX2-8-66	107	87	1.23	0.06872	0.00283	1.27861	0.09324	0.13728	0.00177	890	83	836	42	829	10	99
17XX2-8-67	42	75	0.57	0.07824	0.003	1.47162	0.10034	0.14679	0.00188	1153	74	919	41	883	11	96
17XX2-8-68	33	42	0.77	0.0667	0.00401	1.0625	0.10727	0.12105	0.00203	828	121	735	53	737	12	100
17XX2-8-69	67	144	0.46	0.05793	0.0026	0.59992	0.03671	0.08157	0.00102	527	96	477	23	506	6	106
17XX2-8-70	21	49	0.43	0.18454	0.00341	12.62586	0.96626	0.50332	0.0056	2694	30	2652	72	2628	24	103
17XX2-8-71	91	109	0.84	0.06789	0.00232	1.17409	0.06774	0.13233	0.00151	865	69	789	32	801	9	102
17XX2-8-72	253	175	1.45	0.06938	0.00199	1.17552	0.0561	0.11922	0.00124	910	58	789	26	726	7	92
17XX2-8-73	64	103	0.62	0.06168	0.0024	1.00892	0.06271	0.12077	0.00144	663	81	708	32	735	8	104
17XX2-8-74	43	49	0.88	0.07236	0.00372	1.31611	0.12506	0.13239	0.00202	996	101	853	55	802	11	94
17XX2-8-75	24	36	0.68	0.06791	0.00468	1.10247	0.12263	0.12227	0.00217	866	137	755	59	744	12	99
17XX2-8-76	123	130	0.94	0.06618	0.00226	1.18949	0.06689	0.1253	0.00139	812	70	796	31	761	8	96
17XX2-8-77	38	35	1.08	0.06874	0.00443	1.1488	0.11928	0.12281	0.00211	891	128	777	56	747	12	96
17XX2-8-78	41	81	0.50	0.06445	0.00289	1.11344	0.08565	0.12262	0.00162	756	92	760	41	746	9	98
17XX2-8-79	66	50	1.33	0.11493	0.00309	4.66046	0.36209	0.31191	0.00381	1879	48	1760	65	1750	19	107
17XX2-8-80	90	176	0.51	0.05535	0.00201	0.60601	0.02967	0.07824	0.00083	426	79	481	19	486	5	101
No.81	8.77	20.23	0.43	0.0769	0.00241	1.41959	0.04357	0.13387	0.00176	1119	61	897	18	810	10	90
No.82	30.09	86.38	0.35	0.06055	0.00118	0.90023	0.01733	0.10781	0.00121	623	41	652	9	660	7	101
No.83	23.08	25.34	0.91	0.06747	0.00192	1.25935	0.03515	0.13537	0.0017	852	58	828	16	818	10	99
No.84	57.92	50.48	1.15	0.06812	0.0014	1.30627	0.02646	0.13906	0.00159	872	42	849	12	839	9	99
No.85	72.81	54.16	1.34	0.10366	0.00147	4.20077	0.05966	0.29388	0.00323	1691	26	1674	12	1661	16	99
No.86	46.15	57.51	0.80	0.0671	0.00136	1.23756	0.02468	0.13375	0.00152	841	41	818	11	809	9	99
No.87	20.52	20.94	0.98	0.06606	0.00212	1.2495	0.03935	0.13716	0.00179	808	66	823	18	829	10	101
No.88	114.57	109.62	1.05	0.13106	0.00146	6.4059	0.07289	0.35446	0.00377	2112	19	2033	10	1956	18	96
No.89	20.77	25.38	0.82	0.06883	0.00202	1.35722	0.03897	0.143	0.00182	894	59	871	17	862	10	99
No.90	51.92	55.21	0.94	0.06333	0.00137	1.16788	0.02489	0.13373	0.00155	720	45	786	12	809	9	103
No.91	127.38	76.45	1.67	0.06225	0.00129	0.92389	0.01889	0.10764	0.00123	683	44	664	10	659	7	99
No.92	57.58	139.82	0.41	0.11181	0.00126	4.87974	0.05607	0.31653	0.00337	1829	20	1799	10	1773	16	99

No.93	28.18	78.12	0.36	0.16346	0.0018	11.02559	0.12446	0.4892	0.00524	2492	18	2525	11	2567	23	102
No.94	88.32	135.15	0.65	0.06914	0.00107	1.30886	0.02025	0.13729	0.0015	903	32	850	9	829	9	98
No.95	75.14	71.97	1.04	0.0637	0.00125	1.1782	0.02291	0.13415	0.00153	732	41	791	11	812	9	103
No.96	131.52	136.1	0.97	0.16405	0.00172	10.70929	0.11582	0.47345	0.00503	2498	18	2498	10	2499	22	100
No.97	37.64	51.6	0.73	0.07536	0.00152	1.39103	0.02762	0.13387	0.00155	1078	40	885	12	810	9	92

**Supplementary Table S2** In-situ Lu–Hf isotopic data for detrital zircons of the late Neoproterozoic, early Cambrian and early Silurian sedimentary rocks from the northwestern margin of the Yangtze Block.

Sample	$^{176}\text{Yb}/^{177}\text{Hf}$	$^{176}\text{Lu}/^{177}\text{Hf}$	$^{176}\text{Hf}/^{177}\text{Hf}$	Age (Ma)	$^{176}\text{Hf}/^{177}\text{Hf}$ (t)	$\varepsilon_{(\text{Hf})}\text{t}$	$T_{\text{DM}}^1$ (Ga)	$T_{\text{DM}}^2$ (Ga)	$f_{\text{Lu/Hf}}$
17XX2-4 N32°47'32", E107°52'32", Gray-green sandstone, Sinian Nantuo Formation									
No.01	0.02	0.000477	0.282510	764	0.282503	7.4	1.04	1.12	-0.99
No.02	0.03	0.001097	0.282269	749	0.282254	-1.8	1.39	1.57	-0.97
No.03	0.07	0.002299	0.282140	795	0.282106	-6.0	1.62	1.82	-0.93
No.04	0.02	0.000494	0.282429	750	0.282422	4.2	1.15	1.27	-0.99
No.05	0.01	0.000334	0.282468	723	0.282463	5.1	1.09	1.20	-0.99
No.08	0.02	0.000498	0.282496	667	0.282489	4.7	1.06	1.17	-0.99
No.09	0.03	0.000928	0.282491	771	0.282477	6.6	1.07	1.16	-0.97
No.10	0.02	0.000533	0.282454	783	0.282446	5.8	1.11	1.21	-0.98
No.11	0.02	0.000538	0.282444	745	0.282436	4.6	1.13	1.24	-0.98
No.12	0.02	0.000568	0.282439	740	0.282431	4.3	1.14	1.26	-0.98
No.13	0.02	0.000521	0.282473	731	0.282466	5.3	1.09	1.20	-0.98
No.14	0.01	0.000361	0.282450	738	0.282445	4.7	1.11	1.23	-0.99
No.16	0.02	0.000553	0.282484	752	0.282476	6.1	1.07	1.17	-0.98
No.17	0.02	0.000599	0.282515	764	0.282506	7.5	1.03	1.11	-0.98
No.18	0.02	0.000509	0.282466	742	0.282459	5.3	1.10	1.20	-0.98
No.19	0.04	0.001067	0.282137	825	0.282120	-4.8	1.57	1.78	-0.97
No.20	0.02	0.000695	0.282267	744	0.282257	-1.8	1.38	1.57	-0.98
No.21	0.03	0.001040	0.282105	786	0.282090	-6.8	1.62	1.85	-0.97
No.22	0.01	0.000322	0.282485	696	0.282481	5.1	1.07	1.18	-0.99
No.23	0.02	0.000817	0.282284	756	0.282272	-1.0	1.36	1.53	-0.98
No.24	0.02	0.000582	0.282498	765	0.282489	6.9	1.06	1.14	-0.98
No.25	0.01	0.000410	0.282510	743	0.282504	6.9	1.03	1.12	-0.99
No.26	0.02	0.000660	0.282526	736	0.282517	7.2	1.02	1.10	-0.98
No.27	0.01	0.000392	0.282133	787	0.282127	-5.4	1.55	1.78	-0.99
No.28	0.04	0.001150	0.282466	740	0.282450	5.0	1.12	1.22	-0.97
No.29	0.04	0.001167	0.282485	745	0.282469	5.7	1.09	1.18	-0.96
No.30	0.01	0.000399	0.282520	741	0.282514	7.3	1.02	1.10	-0.99
No.31	0.01	0.000440	0.282254	817	0.282247	-0.5	1.39	1.56	-0.99
No.32	0.02	0.000449	0.282496	748	0.282489	6.5	1.05	1.15	-0.99

No.34	0.01	0.000367	0.282518	745	0.282512	7.3	1.02	1.11	-0.99
No.35	0.03	0.000771	0.282348	783	0.282336	1.9	1.27	1.41	-0.98
No.36	0.01	0.000337	0.282475	732	0.282470	5.5	1.08	1.19	-0.99
No.37	0.02	0.000450	0.282457	718	0.282451	4.5	1.11	1.23	-0.99
No.38	0.01	0.000358	0.282480	745	0.282475	6.0	1.07	1.17	-0.99
No.39	0.02	0.000576	0.282492	736	0.282484	6.1	1.06	1.16	-0.98
No.40	0.02	0.000612	0.282482	730	0.282473	5.6	1.08	1.18	-0.98
No.41	0.02	0.000450	0.282479	738	0.282472	5.7	1.08	1.18	-0.99
No.42	0.02	0.000445	0.282284	778	0.282278	-0.3	1.35	1.52	-0.99
No.43	0.02	0.000461	0.282068	886	0.282060	-5.6	1.64	1.87	-0.99
No.44	0.05	0.001609	0.282477	743	0.282454	5.2	1.11	1.21	-0.95
No.45	0.03	0.000942	0.282485	767	0.282472	6.3	1.08	1.17	-0.97
No.46	0.05	0.001447	0.282362	784	0.282340	2.0	1.27	1.40	-0.96
No.47	0.03	0.001059	0.282441	785	0.282425	5.1	1.15	1.25	-0.97
No.48	0.01	0.000357	0.282497	772	0.282492	7.1	1.05	1.14	-0.99
No.49	0.03	0.000972	0.282513	785	0.282499	7.7	1.05	1.12	-0.97
No.50	0.03	0.001074	0.282384	741	0.282369	2.1	1.23	1.37	-0.97
No.51	0.01	0.000297	0.282565	731	0.282561	8.7	0.96	1.02	-0.99
No.52	0.03	0.000829	0.282343	819	0.282331	2.5	1.28	1.41	-0.98
No.53	0.02	0.000552	0.282493	744	0.282485	6.3	1.06	1.16	-0.98
No.54	0.02	0.000644	0.282497	734	0.282488	6.2	1.06	1.15	-0.98
No.55	0.01	0.000395	0.282504	739	0.282498	6.6	1.04	1.13	-0.99
No.56	0.02	0.000694	0.282462	736	0.282452	4.9	1.11	1.22	-0.98
No.57	0.04	0.001032	0.282401	722	0.282387	2.3	1.20	1.34	-0.97
No.58	0.01	0.000439	0.282497	764	0.282490	6.9	1.05	1.14	-0.99
No.59	0.04	0.001354	0.282532	766	0.282513	7.8	1.03	1.10	-0.96
No.60	0.01	0.000410	0.282508	775	0.282502	7.6	1.04	1.12	-0.99
No.61	0.01	0.000401	0.282458	753	0.282452	5.3	1.11	1.21	-0.99
No.63	0.04	0.001179	0.282543	822	0.282525	9.4	1.01	1.06	-0.96
No.64	0.02	0.000594	0.282480	735	0.282472	5.6	1.08	1.18	-0.98
No.65	0.02	0.000725	0.282384	742	0.282374	2.3	1.22	1.36	-0.98
No.66	0.04	0.001407	0.282240	843	0.282218	-1.0	1.44	1.61	-0.96
No.68	0.03	0.000783	0.282567	708	0.282557	8.0	0.96	1.04	-0.98
No.69	0.01	0.000430	0.282485	761	0.282479	6.4	1.07	1.16	-0.99
No.70	0.02	0.000706	0.282565	832	0.282554	10.7	0.97	1.00	-0.98

No.71	0.01	0.000430	0.282484	679	0.282478	4.6	1.07	1.19	-0.99
No.72	0.02	0.000586	0.282087	804	0.282078	-6.8	1.62	1.87	-0.98
No.73	0.02	0.000657	0.282478	747	0.282468	5.8	1.09	1.19	-0.98
No.74	0.06	0.001814	0.282418	759	0.282392	3.3	1.20	1.32	-0.95
No.75	0.01	0.000441	0.282461	731	0.282455	4.9	1.10	1.21	-0.99
No.76	0.08	0.002265	0.282178	791	0.282144	-4.7	1.57	1.75	-0.93
No.77	0.01	0.000418	0.282540	736	0.282535	7.9	0.99	1.07	-0.99
No.78	0.03	0.000824	0.282321	758	0.282309	0.4	1.31	1.47	-0.98
No.79	0.02	0.000530	0.282390	764	0.282382	3.1	1.20	1.34	-0.98
No.80	0.09	0.002625	0.282482	705	0.282447	4.1	1.14	1.24	-0.92
17XX2-5 N32°44'23", E107°54'17", Green siltstone, Sinian Dengying Formation									
No.02	0.03	0.000818	0.282455	695	0.282444	3.7	1.12	1.25	-0.98
No.03	0.03	0.000831	0.282435	722	0.282424	3.6	1.15	1.27	-0.97
No.04	0.07	0.001786	0.282474	719	0.282449	4.5	1.12	1.23	-0.95
No.05	0.05	0.001451	0.282496	729	0.282476	5.6	1.08	1.18	-0.96
No.06	0.03	0.000825	0.282575	585	0.282566	5.6	0.95	1.06	-0.98
No.07	0.04	0.001066	0.282347	751	0.282332	1.0	1.28	1.43	-0.97
No.08	0.03	0.000823	0.282446	836	0.282433	6.5	1.13	1.22	-0.98
No.09	0.04	0.001162	0.282451	751	0.282435	4.7	1.14	1.25	-0.97
No.10	0.02	0.000652	0.282392	721	0.282383	2.2	1.20	1.35	-0.98
No.11	0.03	0.000994	0.282506	765	0.282491	7.0	1.06	1.14	-0.97
No.12	0.03	0.001028	0.282475	768	0.282460	5.9	1.10	1.19	-0.97
No.13	0.02	0.000716	0.282422	710	0.282413	3.0	1.16	1.30	-0.98
No.14	0.06	0.001612	0.282449	816	0.282425	5.8	1.15	1.24	-0.95
No.15	0.02	0.000695	0.282455	775	0.282444	5.5	1.12	1.22	-0.98
No.16	0.06	0.001633	0.282483	745	0.282460	5.4	1.11	1.20	-0.95
No.17	0.11	0.002889	0.282455	732	0.282415	3.5	1.19	1.29	-0.91
No.18	0.03	0.000840	0.282387	828	0.282374	4.2	1.22	1.33	-0.97
No.19	0.04	0.001408	0.282435	775	0.282415	4.5	1.17	1.27	-0.96
No.20	0.06	0.001867	0.282471	727	0.282445	4.5	1.13	1.23	-0.94
No.21	0.03	0.001000	0.282506	718	0.282493	6.0	1.05	1.15	-0.97
No.22	0.06	0.001546	0.282481	741	0.282459	5.3	1.11	1.20	-0.95
No.23	0.04	0.001055	0.282443	714	0.282429	3.6	1.15	1.27	-0.97
No.24	0.07	0.001921	0.282487	782	0.282459	6.2	1.11	1.19	-0.94
No.25	0.02	0.000765	0.282480	721	0.282469	5.2	1.09	1.19	-0.98

No.26	0.05	0.001220	0.282521	739	0.282504	6.8	1.04	1.12	-0.96
No.27	0.04	0.001214	0.282493	752	0.282476	6.1	1.08	1.17	-0.96
No.28	0.03	0.000859	0.282523	725	0.282512	6.8	1.03	1.11	-0.97
No.29	0.05	0.001470	0.282461	759	0.282440	5.0	1.13	1.23	-0.96
No.30	0.03	0.000830	0.282495	714	0.282484	5.6	1.07	1.17	-0.98
No.31	0.07	0.001991	0.282528	612	0.282505	4.1	1.05	1.16	-0.94
No.32	0.04	0.001076	0.282529	737	0.282514	7.2	1.03	1.11	-0.97
No.33	0.05	0.001394	0.282516	735	0.282496	6.5	1.05	1.14	-0.96
No.36	0.02	0.000521	0.282455	714	0.282448	4.3	1.11	1.23	-0.98
No.37	0.02	0.000789	0.282473	737	0.282462	5.3	1.10	1.20	-0.98
No.38	0.07	0.002100	0.282410	719	0.282382	2.1	1.23	1.35	-0.94
No.39	0.03	0.001036	0.282505	756	0.282490	6.7	1.06	1.14	-0.97
No.40	0.04	0.001241	0.282446	760	0.282428	4.6	1.15	1.25	-0.96
No.41	0.02	0.000501	0.282396	836	0.282388	4.9	1.19	1.30	-0.98
No.42	0.06	0.001551	0.282452	777	0.282430	5.1	1.15	1.25	-0.95
No.43	0.04	0.001162	0.282454	690	0.282438	3.4	1.13	1.26	-0.96
No.44	0.03	0.000890	0.282511	756	0.282498	7.0	1.05	1.13	-0.97
No.45	0.03	0.000885	0.282498	722	0.282486	5.8	1.06	1.16	-0.97
No.48	0.02	0.000714	0.282390	834	0.282379	4.5	1.21	1.32	-0.98
No.49	0.03	0.000887	0.282441	734	0.282429	4.1	1.14	1.26	-0.97
No.50	0.02	0.000607	0.282495	845	0.282486	8.6	1.06	1.12	-0.98
No.51	0.04	0.001160	0.282479	726	0.282463	5.1	1.10	1.20	-0.97
No.52	0.03	0.000938	0.282498	727	0.282485	5.9	1.07	1.16	-0.97
No.53	0.03	0.000895	0.282470	736	0.282458	5.1	1.10	1.21	-0.97
No.54	0.03	0.001220	0.282504	741	0.282487	6.3	1.06	1.15	-0.96
No.56	0.03	0.000918	0.282430	733	0.282418	3.7	1.16	1.28	-0.97
No.57	0.03	0.000908	0.282525	728	0.282512	6.9	1.03	1.11	-0.97
No.58	0.07	0.002060	0.282537	769	0.282507	7.6	1.04	1.11	-0.94
No.59	0.04	0.001177	0.282484	719	0.282469	5.1	1.09	1.19	-0.96
No.60	0.07	0.001991	0.282559	751	0.282531	8.1	1.01	1.07	-0.94
No.61	0.03	0.000819	0.282458	727	0.282447	4.6	1.12	1.23	-0.98
No.62	0.03	0.000993	0.282435	738	0.282421	3.9	1.16	1.27	-0.97
No.63	0.05	0.001254	0.282478	696	0.282461	4.4	1.10	1.21	-0.96
No.64	0.04	0.000992	0.282545	732	0.282531	7.6	1.00	1.08	-0.97
No.65	0.04	0.001097	0.282563	702	0.282548	7.6	0.98	1.06	-0.97

No.66	0.03	0.000815	0.282480	742	0.282468	5.7	1.09	1.19	-0.98
No.67	0.03	0.000784	0.282458	735	0.282447	4.7	1.12	1.23	-0.98
No.68	0.05	0.001646	0.282506	682	0.282485	4.9	1.07	1.18	-0.95
No.69	0.05	0.001235	0.282544	700	0.282527	6.8	1.01	1.09	-0.96
No.71	0.06	0.001896	0.282393	667	0.282369	0.5	1.24	1.39	-0.94
No.72	0.06	0.001707	0.282450	694	0.282427	3.1	1.16	1.28	-0.95
No.73	0.05	0.001543	0.282369	777	0.282346	2.1	1.27	1.40	-0.95
No.74	0.03	0.000731	0.282491	752	0.282481	6.3	1.07	1.16	-0.98
No.75	0.05	0.001317	0.282467	685	0.282450	3.7	1.12	1.24	-0.96
No.76	0.03	0.001010	0.282477	732	0.282463	5.2	1.10	1.20	-0.97
No.77	0.03	0.000853	0.282441	682	0.282430	3.0	1.14	1.28	-0.97
No.78	0.03	0.001101	0.282424	715	0.282409	2.9	1.17	1.30	-0.97
No.79	0.05	0.001310	0.282326	806	0.282307	1.3	1.32	1.46	-0.96
17XX2-6 N32°43'44", E107°53'51", Siltstone, Early Cambrian									
No.01	0.02	0.000439	0.281991	801	0.281984	-10.2	1.75	2.04	-0.99
No.02	0.06	0.001562	0.282175	822	0.282150	-3.8	1.54	1.73	-0.95
No.04	0.05	0.001729	0.282327	812	0.282301	1.3	1.33	1.47	-0.95
No.06	0.03	0.000793	0.281118	2535	0.281079	-3.0	2.95	3.08	-0.98
No.07	0.04	0.001374	0.282445	607	0.282429	1.3	1.15	1.30	-0.96
No.08	0.08	0.002415	0.282487	510	0.282464	0.3	1.12	1.27	-0.93
No.09	0.02	0.000658	0.281024	2536	0.280992	-6.0	3.07	3.23	-0.98
No.10	0.04	0.000999	0.282508	589	0.282497	3.3	1.05	1.18	-0.97
No.11	0.02	0.000659	0.282519	759	0.282510	7.5	1.03	1.11	-0.98
No.12	0.02	0.000463	0.281244	2197	0.281224	-5.6	2.76	2.93	-0.99
No.13	0.04	0.001349	0.282112	839	0.282091	-5.6	1.62	1.83	-0.96
No.14	0.05	0.001913	0.282495	834	0.282465	7.6	1.10	1.16	-0.94
No.15	0.05	0.001474	0.281452	1835	0.281400	-7.6	2.55	2.74	-0.96
No.16	0.02	0.000953	0.282281	812	0.282266	0.0	1.37	1.53	-0.97
No.18	0.04	0.001250	0.281214	2071	0.281164	-10.6	2.86	3.08	-0.96
No.19	0.03	0.000973	0.282109	942	0.282092	-3.2	1.61	1.80	-0.97
No.20	0.03	0.001097	0.282591	742	0.282575	9.4	0.94	0.99	-0.97
No.21	0.02	0.000618	0.280873	2521	0.280844	-11.7	3.27	3.49	-0.98
No.22	0.02	0.000673	0.282541	731	0.282532	7.7	1.00	1.08	-0.98
No.23	0.02	0.000624	0.281347	2549	0.281316	5.8	2.63	2.66	-0.98
No.24	0.02	0.000515	0.281221	2559	0.281196	1.7	2.79	2.87	-0.98

No.25	0.05	0.001590	0.282090	599	0.282072	-11.6	1.66	1.94	-0.95
No.26	0.04	0.001422	0.281475	2072	0.281419	-1.5	2.51	2.63	-0.96
No.27	0.03	0.001198	0.282058	852	0.282038	-7.1	1.69	1.92	-0.96
No.28	0.02	0.000499	0.282123	857	0.282115	-4.3	1.57	1.78	-0.98
No.29	0.04	0.001191	0.282306	782	0.282288	0.2	1.34	1.50	-0.96
No.30	0.06	0.001986	0.282355	793	0.282326	1.7	1.30	1.43	-0.94
No.31	0.03	0.000941	0.281639	828	0.281624	-22.3	2.26	2.66	-0.97
No.32	0.04	0.001308	0.281714	817	0.281694	-20.1	2.17	2.54	-0.96
No.33	0.05	0.001512	0.282161	893	0.282135	-2.8	1.56	1.74	-0.95
No.34	0.02	0.000815	0.282138	813	0.282126	-4.9	1.56	1.78	-0.98
No.35	0.06	0.001871	0.281357	1795	0.281293	-12.3	2.71	2.94	-0.94
No.36	0.02	0.000780	0.282085	849	0.282073	-6.0	1.63	1.86	-0.98
No.38	0.03	0.000961	0.282181	897	0.282164	-1.7	1.51	1.68	-0.97
No.39	0.03	0.001000	0.282462	780	0.282447	5.7	1.12	1.21	-0.97
No.40	0.11	0.003712	0.282061	781	0.282006	-9.9	1.81	2.00	-0.89
No.41	0.03	0.000944	0.281253	2556	0.281207	2.0	2.78	2.85	-0.97
No.42	0.02	0.000608	0.282475	742	0.282466	5.6	1.09	1.19	-0.98
No.43	0.03	0.000950	0.282176	815	0.282162	-3.6	1.51	1.71	-0.97
No.44	0.04	0.001371	0.282535	869	0.282512	10.0	1.03	1.07	-0.96
No.45	0.02	0.000824	0.281226	2379	0.281188	-2.7	2.81	2.94	-0.98
No.46	0.05	0.001667	0.281825	827	0.281799	-16.2	2.04	2.35	-0.95
No.48	0.06	0.001848	0.282407	1106	0.282369	10.3	1.22	1.25	-0.94
No.49	0.04	0.001505	0.282470	828	0.282447	6.8	1.12	1.20	-0.95
No.50	0.04	0.001319	0.281976	828	0.281955	-10.6	1.81	2.08	-0.96
No.51	0.06	0.001822	0.282275	781	0.282248	-1.3	1.41	1.57	-0.95
No.52	0.05	0.001365	0.281907	937	0.281883	-10.8	1.91	2.17	-0.96
No.53	0.01	0.000398	0.280908	2458	0.280889	-11.5	3.20	3.43	-0.99
No.54	0.02	0.000701	0.281179	2471	0.281145	-2.1	2.87	2.98	-0.98
No.55	0.06	0.001891	0.282130	818	0.282100	-5.7	1.62	1.82	-0.94
No.56	0.05	0.001902	0.281671	874	0.281640	-20.8	2.27	2.62	-0.94
No.57	0.01	0.000433	0.281315	1930	0.281299	-9.1	2.66	2.89	-0.99
No.58	0.02	0.000682	0.281794	831	0.281783	-16.7	2.03	2.38	-0.98
No.59	0.04	0.001355	0.282654	512	0.282641	6.6	0.86	0.95	-0.96
No.60	0.06	0.002006	0.282335	766	0.282306	0.4	1.33	1.47	-0.94
No.61	0.04	0.001495	0.282127	804	0.282104	-5.9	1.61	1.82	-0.95

No.62	0.05	0.001763	0.282376	791	0.282349	2.5	1.26	1.39	-0.95
No.63	0.03	0.001186	0.281865	760	0.281848	-15.9	1.96	2.29	-0.96
No.64	0.05	0.001780	0.282328	768	0.282302	0.4	1.33	1.48	-0.95
No.65	0.05	0.001490	0.281718	1769	0.281668	0.4	2.18	2.29	-0.96
No.66	0.01	0.000359	0.281315	2018	0.281301	-7.0	2.66	2.85	-0.99
No.67	0.04	0.001144	0.280799	2500	0.280745	-15.7	3.41	3.67	-0.97
No.68	0.04	0.001328	0.282264	856	0.282242	0.2	1.41	1.56	-0.96
No.69	0.04	0.001447	0.281378	2481	0.281309	4.0	2.65	2.69	-0.96
No.70	0.02	0.000528	0.281103	2560	0.281077	-2.5	2.95	3.07	-0.98
No.71	0.07	0.002048	0.282005	734	0.281977	-11.9	1.80	2.07	-0.94
No.72	0.05	0.001606	0.282155	962	0.282126	-1.6	1.57	1.73	-0.95
No.73	0.04	0.001500	0.282496	770	0.282475	6.5	1.08	1.17	-0.95
No.74	0.14	0.004637	0.282555	915	0.282475	9.7	1.09	1.12	-0.86
No.75	0.04	0.001070	0.282441	728	0.282426	3.9	1.15	1.27	-0.97
No.76	0.05	0.001603	0.281309	2572	0.281230	3.3	2.75	2.80	-0.95
No.77	0.02	0.000833	0.281794	722	0.281783	-19.1	2.04	2.42	-0.97
No.78	0.07	0.002717	0.282188	814	0.282146	-4.2	1.57	1.74	-0.92
No.79	0.06	0.001925	0.282402	987	0.282366	7.5	1.23	1.29	-0.94
No.80	0.03	0.000869	0.281327	1715	0.281298	-14.0	2.68	2.96	-0.97
<b>17XX2-8 N32°50'49", E107°52', Shale, Early Silurian Longmaxi Formation</b>									
No.01	0.03	0.000883	0.281348	2306	0.281309	-0.1	2.65	2.75	-0.97
No.02	0.02	0.000471	0.282524	747	0.282517	7.5	1.02	1.10	-0.99
No.03	0.03	0.001091	0.282536	494	0.282526	2.2	1.02	1.16	-0.97
No.04	0.02	0.000536	0.282533	863	0.282524	10.3	1.01	1.05	-0.98
No.06	0.02	0.000501	0.281428	1756	0.281412	-9.0	2.51	2.74	-0.98
No.07	0.02	0.000569	0.280910	2413	0.280883	-12.8	3.22	3.46	-0.98
No.08	0.02	0.000660	0.280747	3150	0.280707	-1.9	3.44	3.52	-0.98
No.09	0.02	0.000465	0.281008	2462	0.280986	-8.0	3.08	3.26	-0.99
No.10	0.03	0.000965	0.282530	759	0.282516	7.7	1.02	1.10	-0.97
No.11	0.01	0.000397	0.281268	2462	0.281249	1.4	2.72	2.80	-0.99
No.12	0.01	0.000381	0.282547	740	0.282541	8.2	0.98	1.06	-0.99
No.13	0.02	0.000465	0.281040	2473	0.281018	-6.6	3.03	3.20	-0.99
No.14	0.02	0.000643	0.282464	728	0.282455	4.9	1.10	1.22	-0.98
No.15	0.01	0.000317	0.281290	2476	0.281275	2.6	2.69	2.75	-0.99
No.16	0.02	0.000536	0.281637	1910	0.281617	1.8	2.24	2.33	-0.98

No.17	0.02	0.000549	0.281411	1823	0.281392	-8.2	2.54	2.76	-0.98
No.19	0.05	0.001190	0.282079	883	0.282059	-5.7	1.66	1.88	-0.96
No.20	0.02	0.000684	0.282515	766	0.282505	7.5	1.03	1.11	-0.98
No.21	0.05	0.001405	0.282173	823	0.282151	-3.8	1.54	1.73	-0.96
No.22	0.02	0.000491	0.281266	1940	0.281248	-10.7	2.73	2.97	-0.99
No.23	0.03	0.001003	0.282503	950	0.282485	10.9	1.06	1.09	-0.97
No.24	0.02	0.000482	0.282025	796	0.282018	-9.1	1.70	1.98	-0.99
No.25	0.02	0.000659	0.282567	708	0.282558	8.1	0.96	1.04	-0.98
No.26	0.01	0.000442	0.282124	822	0.282117	-5.0	1.57	1.79	-0.99
No.27	0.01	0.000380	0.281281	2457	0.281263	1.8	2.70	2.78	-0.99
No.28	0.02	0.000634	0.281411	1724	0.281390	-10.5	2.55	2.79	-0.98
No.29	0.02	0.000650	0.281970	833	0.281960	-10.3	1.79	2.07	-0.98
No.30	0.02	0.000670	0.282210	798	0.282200	-2.6	1.46	1.65	-0.98
No.31	0.03	0.000974	0.282387	943	0.282370	6.6	1.22	1.30	-0.97
No.32	0.02	0.000549	0.282444	738	0.282436	4.4	1.13	1.25	-0.98
No.33	0.03	0.000811	0.282439	922	0.282425	8.1	1.14	1.21	-0.98
No.35	0.02	0.000724	0.282341	1022	0.282327	6.9	1.28	1.35	-0.98
No.36	0.02	0.000451	0.281839	823	0.281832	-15.1	1.96	2.30	-0.99
No.37	0.03	0.000799	0.282585	827	0.282573	11.2	0.94	0.97	-0.98
No.38	0.04	0.001234	0.282442	790	0.282424	5.1	1.15	1.25	-0.96
No.39	0.01	0.000191	0.281184	1783	0.281177	-16.7	2.82	3.15	-0.99
No.40	0.03	0.000745	0.282308	803	0.282297	0.9	1.32	1.48	-0.98
No.42	0.01	0.000388	0.281904	803	0.281898	-13.2	1.86	2.19	-0.99
No.43	0.01	0.000429	0.280759	3160	0.280733	-0.8	3.40	3.48	-0.99
No.44	0.02	0.000640	0.280921	3124	0.280882	3.7	3.21	3.23	-0.98
No.45	0.01	0.000458	0.282550	727	0.282544	8.0	0.98	1.06	-0.99
No.46	0.01	0.000358	0.282522	741	0.282517	7.4	1.02	1.10	-0.99
No.48	0.02	0.000700	0.282585	723	0.282576	9.0	0.94	1.00	-0.98
No.49	0.02	0.000442	0.281162	1998	0.281145	-13.0	2.87	3.13	-0.99
No.50	0.04	0.001116	0.282395	766	0.282379	3.0	1.21	1.34	-0.97
No.51	0.03	0.000804	0.282504	511	0.282496	1.5	1.05	1.21	-0.98
No.52	0.02	0.000491	0.282144	828	0.282136	-4.2	1.54	1.76	-0.99
No.53	0.01	0.000430	0.282631	738	0.282625	11.1	0.87	0.91	-0.99
No.54	0.02	0.000445	0.281024	2062	0.281007	-16.4	3.05	3.35	-0.99
No.56	0.02	0.000619	0.282184	802	0.282175	-3.4	1.49	1.70	-0.98

No.57	0.01	0.000371	0.282473	716	0.282468	5.1	1.08	1.20	-0.99
No.58	0.03	0.000965	0.282447	770	0.282433	5.0	1.14	1.24	-0.97
No.59	0.01	0.000388	0.281309	2422	0.281291	2.0	2.67	2.74	-0.99
No.60	0.01	0.000350	0.280979	2499	0.280963	-7.9	3.11	3.29	-0.99
No.61	0.02	0.000697	0.282597	736	0.282587	9.7	0.92	0.97	-0.98
No.63	0.01	0.000470	0.282041	851	0.282033	-7.4	1.68	1.93	-0.99
No.64	0.00	0.000136	0.281153	2274	0.281147	-6.6	2.86	3.04	-1.00
No.65	0.01	0.000291	0.282533	734	0.282529	7.6	1.00	1.08	-0.99
No.66	0.02	0.000573	0.281928	829	0.281919	-11.9	1.84	2.14	-0.98
No.67	0.03	0.001195	0.282593	883	0.282573	12.5	0.94	0.95	-0.96
No.68	0.01	0.000455	0.282539	737	0.282533	7.8	0.99	1.07	-0.99
No.69	0.03	0.000882	0.282561	506	0.282553	3.4	0.98	1.11	-0.97
No.70	0.01	0.000272	0.281221	2694	0.281207	5.2	2.78	2.80	-0.99
No.71	0.02	0.000485	0.281719	801	0.281712	-19.8	2.12	2.52	-0.99
No.72	0.07	0.002272	0.282218	726	0.282187	-4.7	1.51	1.70	-0.93
No.73	0.02	0.000606	0.282492	735	0.282483	6.0	1.06	1.16	-0.98
No.74	0.02	0.000467	0.282178	802	0.282171	-3.6	1.49	1.70	-0.99
No.75	0.01	0.000251	0.282530	744	0.282526	7.7	1.00	1.08	-0.99
No.76	0.04	0.001263	0.282186	761	0.282168	-4.6	1.51	1.72	-0.96
No.77	0.04	0.001305	0.282270	747	0.282252	-1.9	1.40	1.58	-0.96
No.78	0.03	0.000965	0.282524	746	0.282510	7.2	1.03	1.11	-0.97
No.79	0.00	0.000071	0.281227	1879	0.281224	-12.9	2.76	3.03	-1.00
No.80	0.03	0.000983	0.282590	486	0.282581	4.0	0.94	1.06	-0.97