Datashare Table 1. Table of Stratigraphic Data Used in Subsidence Analyses

	Formation	Stage	Lithology*	Age	Thickness (m)**	Cumulative Thickness (m)	Cumulative Thickness (Decomposition)	Tectonic Subsidence	WD Estimated (m)
Chongzuo									
D1l	Huashan	Lochkovian	cong/ss/slt/sh	411	611.1	611.1	872.944	46.361	10
D1n	Nagaoling	Pragian	marl/sh	407	59	670.1	989.242	182.506	100
D1y	Yujiang	L. Emsian	ss/sh	399.511	146	816.1	1257.528	282.607	100
D12nj	Najiao	U. Emsian-Eifilian	dol	390.893	173	989.1	1440.977	195.165	20
D2t	Tongjiawan	Givetian	ls/dol	385	220	1209.1	1674.068	214.509	20
D3g	Guilin	Frasnian	ls	375	68	1277.1	1746.321	226.601	20
D3	Rongxian	Famenian	dol/dolmd/ls	359	720	1997.1	2505.574	339.859	20
C1y	Yanguang	Tournasian	cherty ls	345	80	2077.1	2590.56	356.003	20
C1d	Datang	Visean	ls/dol	326	257	2334.1	2862.675	403.709	20
C2d	Dapu	Serpukhovian-Moscovian	dol	312	174	2508.1	3047.181	430.023	20
C2h	Huanglong	Kasimovian	dol-ls	307	318	2826.1	3383.531	487.189	20
C3	Maping	Gzhelian-Asellian	ls/arg dol	295	618	3444.1	4034.078	602.071	20
P1q	Qixia	Sakmarian-Artinskian	ls/lsmd	276	196	3640.1	4252.542	651.917	20
P1m	Maokou	Kungurian-Wordian	ls/dol-ls	266	321	3961.1	4592.047	716.994	20
unc2				260	0.1	3961.2	4592.147	447.004	0
P2h	Heshan	Capitanian-Wuchjiapingian	ls/mdst/coal	254	92.4	4053.6	4703.075	492.255	10
P2c	Changxing	Changhsingian	cherty ls	252.2	154	4207.6	4874.371	540.661	20
T1m	Majiaoling	Induan	lsmd	249.7	110	4317.6	4991.164	562.646	20
T1b	Beisi	Olenekian	lsmd/oolite ls	247.2	800	5117.6	5937.352	822.604	20
T2b	Banna	Anisian	sh/ss turb.	241	1207	6324.6	7410.338	2227.836	1000
Pingguo									
D1l	Lianhuashan	Lochkovian	ss/sh	411	387	377	499.502	237.731	10
D1n	Nagaoling	Pragian	ss/sh/marl/ls	407	241	528	740.499	431.562	100
D1y	Yujiang	L. Emsian	sh/slt	404.989	227	755	1102.297	569.764	100
D12j1	Najiao	U. Emsian	cherty ls	398	18	853	1206.371	490.212	20
D12j2	Najiao	U. Emsian	dol	393.013	50	903	1259.515	492.155	20
D2m	Mintang	Eifelian	ls/cong-ls	392	247	1150	1521.088	530.099	20
D2t	Tangjiawan	Givetian	ls/dol	385	968	2118	2535.144	711.029	20
D3g	Guilin	Frasnian	ls	375	754	2872	3327.293	872.874	20
D3d	Dongcun		dol/ls	365.781	133	3005	3468.43	896.515	20

D3e	E'toucun	Famennian	lspk	359	181	3186	3660.334	935.246	20
unc2				352	−19.9	3186.1	3660.434	915.256	0
C1y	Yingtan	Tournasian	ls/cherty ls	345	376	3542.1	4036.735	998.439	20
C1d	D'uan	Visean	ls	318	201	3743.1	4249.767	1041.393	20
C2d	Dapu	Serpukhovian-Moscovian	dol	312	46	3789.1	4298.664	1048.712	20
C2h	Huanglong	Kasimovian	ls	307	347	4136.1	4665.507	1122.854	20
C3	Maping	Gzhelian-Asellian	ls	295	300	4436.1	4982.915	1186.954	20
P1q	Qixia	Sakmarian-Artinskian	ls	276	260	4696.1	5258.192	1242.527	20
P1m	Maokou	Kungurian-Wordian	ls	266	299	4995.1	5574.548	1306.467	20
unc3				260	−269.9	4745.2	5574.648	1036.478	0
P2h	Heshan	Capitanian-Changhsingian	ls/mdst/coal	252.2	107	4842.2	5686.663	1075.153	10
T1m	Majiaoling	Induan	cherty ls	249.7	112.5	4944.7	5795.507	1106.821	20
T1b	Beisi	Olenekian	lsmd	247.2	810	5754.7	6653.196	1273.359	20
T1g	Guohua-Banna	Anisian	lsmd/oolite ls	241	2498	8252.7	9164.443	2044.92	20
T2b-h	Banna-Hekou	Anisian-Ladinian	sh/ss turb.	228	2182	10,434.7	11,591.973	2678.559	300
Great Bank of Guizhou									
D2h1	Houhong		ss	399.823	775	775	821.683	288.545	500
D2h2	Houhong	Givetian	ss/sh/lsmd	385	335	1110	1219.451	437.496	500
D3x	Xiangshuidong	Frasnian	chert/lsmd	375	88	1198	1321.515	472.515	500
D3d	Daihua	Famenian	arg ls/lsmd	359	143	1341	1503.144	535.218	500
C1l1	Linqun	Tournaisian	sh/chert/ls	345	105	1446	1682.604	621.538	500
C1l2	Linqun	Visean	sh/chert/ls	326	95	1541	1846.193	682.64	500
Cxl1	Xiaolangfengguan	Serpukhovian-M. Bashkirian	lsmd/chert	315.2	55	1596	1905.222	686.717	500
Cxl2	Xiaolangfengguan	U. Bashkirian-Moscovian	lsmd/chert	307	192	1788	2110.711	711.174	500
Cxl3	Xiaolangfengguan	Asselian	lsmd/chert	295	200	1988	2324.729	751.63	500
P1sd	Sidazhai	Sakmarian-Kungurian	md/ls/chert/cong	274.579	514	2502	3378.403	873.736	500
P2sw	Shaiwa	Kungurian-Changhsingian	ss/chert/ls	252.2	459	2961	3883.607	1003.462	250
T1d	Daye	Induan	lsmd/oolite ls	249.7	305	3266	4207.058	1038.415	20
T1a	Anshun	Olenekian	ls	247.2	220	3486	4440.442	1069.68	20
T2p	Podan	Anisian	dol/ls	241	750	4236	5228.434	1226.925	20
T2l	Longtou	Ladinian	ls	228	1200	5436	6481.956	1482.087	20
T2b	Bianyang	Carnian	sh/ss turb.	216.5	1908	7344	8761.679	2207.848	1000
Yangtze Platform Guiyang									
Zd	Doushantou	Neoproterozoic	mdst/dol/phos.	625	14.3	14.3	17.166	106.827	100
C1d	Dengying	Lower Cambrian	dol/cherty dol	540.12	303	317.3	332.084	139.572	20

unc1				540	−106.9	210.4	245.184	−7.408	0
C1n	Niutitang		sh/slt/chert/phos.	535.7	310	520.4	446.336	256.882	100
C1m	Mingxinsi	Qiongzhusi	sh/ls	530	211	731.4	749.486	386.287	100
C1m2	Mingxinsi	Qiongzhusi	ss/slt/sh	526.5	73	804.4	860.28	424.038	100
C1j	Jindingshan	Changlangpu	ss/slt/mdst	525	189	993.4	1114.107	498.304	100
C1q	Qingxudong	Longwangmiao	dol/cherty dol	520	248	1241.4	1545.285	455.575	20
C2g	Gaotai	Maozhuang	md/dol/sh	513	20	1261.4	1573.089	464.362	20
C2s	Shilengshui	Xuzhuang	dol/arg dol	508	242	1503.4	1829.39	497.686	20
C23l1	Loushanguan		dol/cherty dol	507.4	16	1519.4	1851.106	505.859	20
C23l2	Loushanguan	Zhangxia-Fengshan	ss/slt/mdst	488	624	2143.4	2507.911	599.685	20
O1t	Tongzi	Tremadocian	dol/cherty dol	479	85	2228.4	2598.2	612.759	20
O1h	Honghuaguan	Basal Arenigian	ls	475	27	2255.4	2626.91	618.383	20
O1m	Meitan	Arenigian-Llanvirnian	sh/slt/ss/ls	472	318	2573.4	2954.823	899.953	100
O2h	Huanghuachong	Llanvirnian-Darriwilian	ls	468	50	2623.4	3167.968	818.921	20
O2l	Longjin	U. Caradocian		465	10	2633.4	3178.604	818.909	20
unc2				464	−208.4	2425	3010.205	590.4	0
S1h	Housuo	U. Llandoverian	sh/slt/marl	444	181	2606	3102.262	775.889	100
S2gz1	Gaozhaitian		sh/ls	440	73	2679	3223.641	806.275	100
S2gz2	Gaozhaitian		ss	432	199	2878	3543.634	891.08	100
S2gz3	Gaozhaitian	Llandoverian	sh	428	70	2948	3669.988	922.041	100
unc3				403	−245.9	2702.1	3624.088	576.023	0
D1w	Wudang	Emsian	ss/sh	398	124	2826.1	3773.141	611.122	10
D1m	Mazongling	Eifelian	sh/ss	392	83	2909.1	3878.642	625.519	10
D2l	Longdonshui	Givetian	dol	390.972	42	2951.1	3903.29	633.208	20
D2d	Dushan	Givetian	ss/sh/ls	385	335	3286.1	4270.387	671.965	20
D3g	Gaopochang	Frasnian-Famenian	dol/arg dol/ls	361.305	453	3739.1	4776.432	739.64	20
D1g	Gelaohe	Famenian	dolo-ls/ls	359	50	3789.1	4829.576	746.736	20
C1g	Gelaohe		dolo-ls	356.515	57	3846.1	4890.153	753.373	20
C1t	Tangbagon	Tournaisian	ls/arg ls/sh	345	50	3896.1	4951.097	766.764	20
C1d1	Datang L. mbr		ss/sh/coal/ls	344.974	19.5	3915.6	4996.071	764.572	10
C1d2	Datang U. mbr	Visean	ls/dol	326	69	3984.6	5069.386	772.711	10
C1b	Baizhuo	Serpukhovian	dol/ls	318	228	4212.6	5290.918	806.811	20
C2h1	Huanglong	Bashkirian	ls/chert	312	60	4272.6	5355.307	817.419	20
C2h2	Huanglong	Moskovian	ls/dol-ls/cherty ls	307	100	4372.6	5461.501	832.269	20
C2m	Maping	Gzhelian	ls	299	30	4402.6	5493.4	836.996	20
unc4				290	−313.4	4089.2	5220.006	503.512	0
P1q1	Qixia		ss/sh/coal/ls	284	35	4124.2	5226.541	538.089	20

P1q2	Qixia	Sakmarian-Artinskian	ls/argil ls/dol/chert	276	219	4343.2	5471.002	583.073	20
P1m	Maokou	Kungurian	ls/dol/chert	271	239	4582.2	5724.543	617.8	20
unc5				265	−249.9	4332.3	5514.644	347.805	0
P2l	Wujiaping	Wuchiapingian	ls/sh/chert/coal	254	202	4534.3	5749.295	454.847	20
P2c	Changxing	Changhsingian	cherty ls/ls/sh	252.2	226	4760.3	6057.687	540.332	20
T1d	Daye	Induan	ls/arg ls/sh	249.7	286	5046.3	6441.303	591.129	20
T1a	Anshun	Olenekian	dol/ls/argil dol	247.2	313	5359.3	6794.578	663.952	20
T2h	Huaxi	Anisian	dol/ls/argil dol/sh	241	676	6035.3	7529.936	726.936	20
T2l	Longtou	Ladinian	dol/ls/argil dol	228	840	6875.3	8537.936	785.383	20
T2gy	Gaicha	Carnian	ss/sh/dol/ls	216.5	115	6990.3	8668.39	806.236	20
T3sh	Sanqiao	Norian	slt/sh/ss/ls	203	116	7106.3	8710.465	895.912	100
T3e	Erqiao	Rhatian	sh/ss	199.6	167	7273.3	9462.069	866.69	0

*cong = conglomerate; ss = sandstone; slt = siltstone; sh = shale; mdst = mudstone; ls = limestone; lsmd = lime mudstone; lspk = lime packstone; arg ls = argillaceous limestone; cherty ls = cherty limestone; dol-ls = dolomitic limestone; dol = dolomite; arg dol = argillaceous dolomite; turb. = turbidite; phos. = phosphorite.

**Negative thicknesses represent estimates of thickness of strata eroded from major unconformities, estimated using the maximum thickness of age-equivalent strata from the nearest section lacking unconformity.