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Supplemental Material

Text S1. Abbreviations and reference sources of the Figure 15.

Figure S1. Paleogeographic environments of the western Nanhua Basin (after Jiang et al., 2011 and Bao et al., 2018).

Figure S2. (a) Compiled Mesoproterozoic magmatic age data from both Yangtze Block and Hainan Island (Table S3). (b) late Mesoproterozoic Kunyang Group, southwest Yangtze Block (Our unpublised data). (c) late Mesoproterozoic Liuceng Formation (Six layer of the Shilu Group) in central Hainan Island (Yao et al., 2017).

Table S1. Zircon U–Pb analytical results.

Table S2. In-situ zircon Lu-Hf analytical results.

Table S3. Sources for data compiled in Figure S1.

INTRODUCTION

This supporting Information file contains extended descriptions of analytical methods, geochemical characteristics of the magmatic rocks, and the captions of Table S1-S2.

Text S1 Abbreviations and reference sources of the Figure 15

Abbreviations: SYB—Southern Yangtze Block; WYB—Western Yangtze Block; NYB—Northern Yangtze Block; EYB—Eastern Yangtze Block; CB—Cathaysia Block; PS—PoSen; ALS—Ailaoshan; DCS—Diancangshan; PZH—Panzhihua; KD—Kangding; BK—Bikou; HN—Hannan; DH—Donghai; SX—Shangxi; SXW—Shuangxiwu; SQS—Shuangqiaoshan; BX—Banxi; CSP—Cangshuipu; LJX—Lengjiaxi; FJS—Fangjingshan; DZ—Danzhou; WY—Wuyi; YK—Yunkai. Numbers on data points refer to the following sources: 1. Lin et al. (2012), 2. Liu et al. (2008a), 3. Qi et al. (2012), 4. Wang et al. (2011a), 5. Li et al. (2003b), 6. Zhou et al. (2002b), 7. Li et al. (2003a), 8. Sinclair (2001), 9. Zhou et al. (2006b), 10. Zhao and Zhou (2007), 11. Zhu et al. (2006), 12. Zhu et al. (2008), 13. Li et al. (2003c), 14. Du et al. (2007), 15. Li et al. (2002), 16. Ma et al. (1989), 17. Zhao et al. (2008), 18. Huang et al. (2008), 19. Roger and Calassou (1997), 20. Ling et al. (2001), 21. Pei et al. (2009), 22. Zhao and Zhou (2008), 23. Xia et al. (2009), 24. Dong et al. (2011), 25. Zhou et al. (2002a), 26. Zhao and Zhou (2009), 27. Dong et al. (2012), 28. Zhao et al. (2010), 29. Zhang et al. (2000), 30. Zhao et al. (2006), 31. Zhang et al. (2004), 32. Yan et al. (2004), 33. Wang et al. (2008c), 34. Ling et al. (2003), 35. Liu and Zhang (2013), 36. Ma et al. (1984), 37. Zhao et al. (2013), 38. Bao et al. (2008), 39. Zhang et al. (2006), 40. Chen et al. (2013), 41. Xu et al. (2001), 42. Xu et al. (2006), 43. Liu et al. (2008b), 44. Chen et al. (2010), 45. Liu et al. (2004), 46. Chen et al. (2007), 47. Chen et al. (2003), 48. Hacker et al. (2006), 49. Hu et al. (2007), 50. Zheng et al. (2008), 51. Xue et al. (2010), 52. Li et al. (2010), 53. Wang et al. (2012a), 54. Zhang et al. (2012c), 55. Li et al. (2008a), 56. Wang et al. (2008a), 57. Li et al. (2008b), 58. Wu et al. (2010), 59. Wang et al. (2007b), 60. Zhang et al. (2012b), 61. Zhang et al. (2013a), 62. Wang et al. (2008b), 63. Zhou et al. (2009), 64. Ge et al. (2001), 65. Yin et al. (2013), 66. Wang et al. (2006), 67. Zeng et al. (2005), 68. Li (1999), 69. Wang et al. (2010), 70. Wang et al. (2013b), 71. Zhang et al. (2012a), 72. Ye et al. (2007), 73. Li et al. (2009), 74. Shu et al. (2011), 75. Qin et al. (2006), 76. Zhang et al. (1998).

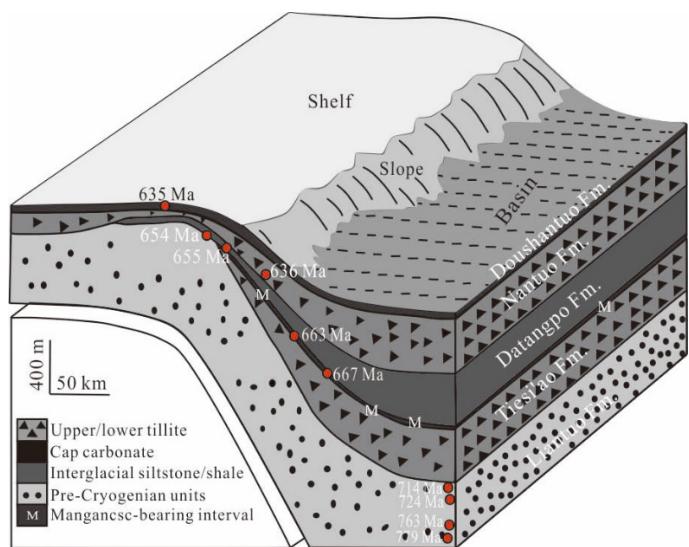


Fig. S1 Paleogeographic environments of the western Nanhua Basin (after Jiang et al., 2011 and Bao et al., 2018).

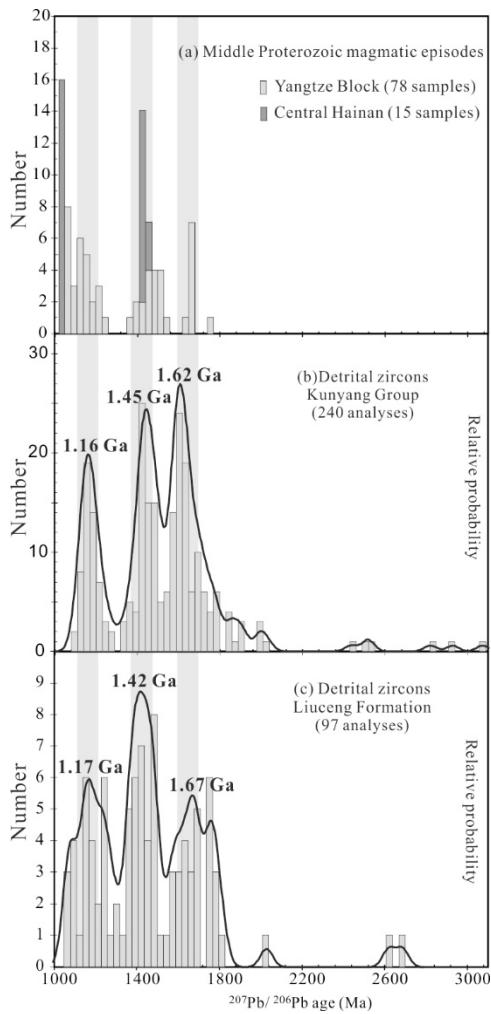


Fig. S2 (a) Compiled Mesoproterozoic magmatic age data from both Yangtze Block and Hainan Island (Table S3). (b) late Mesoproterozoic Kunyang Group, southwest Yangtze Block (Liu et al., 2020). (c) late Mesoproterozoic Liuceng Formation (Six layer of the Shilu Group) in central Hainan Island (Yao et al., 2017).

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Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
LJ-1.1	1.43	0.12411	0.00144	1.29236	0.02408	0.07547	0.00119	754	9	842	16	1081	32
LJ-1.2	0.97	0.13853	0.00170	1.19964	0.02618	0.06286	0.00120	836	10	800	17	704	41
LJ-1.3	2.08	0.12990	0.00167	1.33986	0.03535	0.07433	0.00159	787	10	863	23	1051	43
LJ-1.4	1.12	0.13705	0.00173	1.30083	0.02409	0.06873	0.00100	828	10	846	16	891	30
LJ-1.5	1.41	0.12926	0.00153	1.27499	0.03020	0.07149	0.00152	784	9	835	20	971	43
LJ-1.6	1.88	0.13185	0.00156	1.43203	0.04701	0.07908	0.00247	798	9	902	30	1174	62
LJ-1.7	1.37	0.13994	0.00182	1.99741	0.07605	0.10149	0.00352	844	11	1115	42	1652	64
LJ-1.8	1.08	0.13852	0.00173	1.28438	0.02660	0.06731	0.00121	836	10	839	17	847	37
LJ-1.9	1.35	0.14005	0.00174	1.31872	0.03231	0.06834	0.00150	845	10	854	21	879	45
LJ-1.10	0.92	0.13031	0.00159	1.13575	0.02248	0.06325	0.00107	790	10	770	15	717	36
LJ-1.11	1.67	0.36122	0.00437	6.23784	0.11108	0.12531	0.00183	1988	24	2010	36	2033	26
LJ-1.12	2.88	0.12531	0.00146	1.21269	0.04693	0.07024	0.00261	761	9	806	31	935	76
LJ-1.13	0.88	0.13316	0.00163	1.18490	0.02359	0.06453	0.00109	806	10	794	16	759	36
LJ-1.14	1.30	0.13679	0.00170	1.28457	0.03946	0.06809	0.00193	826	10	839	26	871	59
LJ-1.15	1.56	0.13746	0.00168	1.17431	0.02785	0.06195	0.00131	830	10	789	19	673	45
LJ-1.16	1.20	0.13909	0.00169	1.27928	0.03602	0.06659	0.00171	840	10	837	24	825	54
LJ-1.17	0.98	0.15414	0.00205	1.42742	0.02862	0.06720	0.00108	924	12	900	18	844	34
LJ-1.18	1.26	0.13569	0.00172	1.25759	0.02905	0.06718	0.00137	820	10	827	19	843	42
LJ-1.19	1.77	0.13333	0.00160	1.26540	0.02531	0.06883	0.00117	807	10	830	17	894	35
LJ-1.20	1.01	0.12302	0.00158	1.48025	0.02632	0.08764	0.00131	748	10	922	16	1375	29
LJ-1.21	0.67	0.46409	0.00594	10.58621	0.19471	0.16546	0.00240	2458	31	2488	46	2512	24
LJ-1.22	1.04	0.13449	0.00159	1.30900	0.02519	0.07076	0.00119	813	10	850	16	950	35
LJ-1.23	0.95	0.14602	0.00176	1.43166	0.03005	0.07113	0.00131	879	11	902	19	961	38
LJ-1.24	0.84	0.11299	0.00132	1.25775	0.02187	0.08076	0.00116	690	8	827	14	1216	28
LJ-1.25	0.36	0.15287	0.00189	1.48194	0.02911	0.07033	0.00116	917	11	923	18	938	34
LJ-1.26	0.90	0.13824	0.00169	1.28199	0.02683	0.06724	0.00122	835	10	838	18	845	38
LJ-1.27	1.14	0.13349	0.00163	1.09310	0.04022	0.05943	0.00210	808	10	750	28	583	77
LJ-1.28	1.36	0.13471	0.00166	1.27588	0.02979	0.06868	0.00142	815	10	835	19	889	43

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
LJ-1.29	0.60	0.14449	0.00172	1.41763	0.03497	0.07113	0.00159	870	10	896	22	961	46
LJ-1.30	0.76	0.13618	0.00167	1.24084	0.02397	0.06615	0.00109	823	10	819	16	811	35
LJ-1.31	0.81	0.16419	0.00206	1.67603	0.03108	0.07405	0.00113	980	12	999	19	1043	31
LJ-1.32	1.28	0.12901	0.00157	1.18658	0.02956	0.06682	0.00152	782	10	794	20	832	47
LJ-1.33	1.52	0.12863	0.00162	1.21094	0.03650	0.06788	0.00181	780	10	806	24	865	55
LJ-1.34	0.82	0.14565	0.00194	1.30781	0.03384	0.06527	0.00148	877	12	849	22	783	48
LJ-1.35	0.67	0.13052	0.00157	1.19295	0.02423	0.06632	0.00117	791	9	797	16	816	37
LJ-1.36	1.07	0.12638	0.00148	1.22166	0.02270	0.07014	0.00110	767	9	811	15	932	32
LJ-1.37	0.82	0.49163	0.00598	11.29472	0.19315	0.16667	0.00227	2578	31	2548	44	2524	23
LJ-1.38	0.90	0.13386	0.00166	1.23718	0.02322	0.06707	0.00104	810	10	818	15	840	32
LJ-1.39	1.06	0.13429	0.00163	1.26873	0.02395	0.06851	0.00108	812	10	832	16	884	32
LJ-1.40	0.50	0.48454	0.00592	11.09163	0.19373	0.16612	0.00234	2547	31	2531	44	2519	24
LJ-1.41	1.26	0.13172	0.00159	1.28503	0.03490	0.07070	0.00178	798	10	839	23	949	51
LJ-1.42	1.36	0.13613	0.00168	1.32033	0.02477	0.07032	0.00107	823	10	855	16	938	31
LJ-1.43	1.18	0.13721	0.00166	1.26521	0.02409	0.06702	0.00110	829	10	830	16	838	34
LJ-1.44	0.93	0.13168	0.00159	1.20985	0.02405	0.06675	0.00116	797	10	805	16	830	36
LJ-1.45	1.27	0.13339	0.00160	1.19143	0.02763	0.06478	0.00135	807	10	797	18	767	44
LJ-1.46	1.85	0.13677	0.00171	1.25383	0.05405	0.06691	0.00278	826	10	825	36	835	87
LJ-1.47	0.61	0.14710	0.00180	1.40213	0.02463	0.06917	0.00098	885	11	890	16	904	29
LJ-1.48	2.02	0.12728	0.00154	1.44817	0.02521	0.08258	0.00116	772	9	909	16	1259	27
LJ-1.49	0.96	0.15530	0.00190	1.55007	0.03249	0.07227	0.00127	931	11	951	20	994	36
LJ-1.50	2.34	0.13238	0.00161	1.25067	0.02738	0.06879	0.00138	801	10	824	18	893	41
LJ-1.51	0.47	0.47329	0.00575	10.38021	0.18040	0.15914	0.00223	2498	30	2469	43	2447	24
LJ-1.52	0.62	0.17056	0.00203	1.87607	0.03881	0.07964	0.00141	1015	12	1073	22	1188	35
LJ-1.53	0.93	0.13864	0.00170	1.20283	0.02613	0.06299	0.00119	837	10	802	17	708	40
LJ-1.54	0.91	0.14055	0.00170	1.33074	0.02643	0.06846	0.00110	848	10	859	17	883	33
LJ-1.55	1.11	0.13501	0.00161	1.24979	0.02742	0.06706	0.00129	816	10	823	18	840	40
LJ-1.56	1.05	0.13721	0.00164	1.27816	0.02800	0.06757	0.00130	829	10	836	18	855	40

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
LJ-1.57	0.68	0.13498	0.00167	1.24869	0.02450	0.06711	0.00111	816	10	823	16	841	34
LJ-1.58	0.86	0.14066	0.00174	1.20983	0.02813	0.06243	0.00131	848	10	805	19	689	45
LJ-1.59	0.92	0.36543	0.00449	5.97852	0.10918	0.11856	0.00175	2008	25	1973	36	1935	26
LJ-1.60	0.35	0.50827	0.00615	11.59906	0.20007	0.16549	0.00230	2649	32	2573	44	2513	23
LJ-1.61	0.73	0.14816	0.00188	1.42734	0.02778	0.06977	0.00110	891	11	900	18	922	32
LJ-1.62	0.42	0.16293	0.00198	1.56802	0.03225	0.06975	0.00123	973	12	958	20	921	36
LJ-1.63	0.47	0.24470	0.00340	4.91665	0.09223	0.14550	0.00198	1411	20	1805	34	2294	23
LJ-1.64	0.87	0.13856	0.00168	1.22854	0.02190	0.06428	0.00092	837	10	814	15	751	30
LJ-1.65	0.93	0.13438	0.00165	1.24226	0.05151	0.06709	0.00262	813	10	820	34	840	81
LJ-1.66	1.54	0.13876	0.00165	1.32769	0.02335	0.06938	0.00099	838	10	858	15	910	29
LJ-1.67	1.89	0.13511	0.00161	1.26591	0.02326	0.06799	0.00105	817	10	831	15	868	32
LJ-1.68	0.99	0.12587	0.00152	1.11205	0.02015	0.06413	0.00096	764	9	759	14	746	32
LJ-1.69	1.36	0.12577	0.00148	1.17934	0.02157	0.06794	0.00102	764	9	791	14	867	31
LJ-1.70	1.15	0.13822	0.00168	1.21140	0.02579	0.06369	0.00120	835	10	806	17	731	40
LJ-1.71	0.82	0.13348	0.00178	1.60063	0.02757	0.08779	0.00136	808	11	970	17	1378	30
LJ-1.72	0.56	0.38081	0.00437	9.20830	0.15020	0.17542	0.00233	2080	24	2359	38	2610	22
LJ-1.73	0.64	0.14056	0.00164	1.39476	0.02577	0.07211	0.00117	848	10	887	16	989	33
LJ-1.74	0.68	0.47979	0.00579	10.84866	0.18097	0.16403	0.00217	2526	31	2510	42	2498	22
LJ-1.75	0.91	0.14851	0.00203	1.40151	0.02904	0.06841	0.00110	893	12	890	18	881	33
LJ-1.76	0.90	0.10423	0.00183	1.32420	0.02155	0.09566	0.00170	639	11	856	14	1541	33
LJ-1.77	1.01	0.32322	0.00403	5.30918	0.09925	0.11926	0.00186	1805	23	1870	35	1945	28
LJ-1.78	1.30	0.13917	0.00179	1.27672	0.02303	0.06677	0.00100	840	11	835	15	831	31
LJ-1.79	1.04	0.12695	0.00150	1.18820	0.02941	0.06799	0.00155	770	9	795	20	868	47
LJ-1.80	1.24	0.13628	0.00167	1.22274	0.02493	0.06509	0.00113	824	10	811	17	777	37
LJ-1.81	0.40	0.44135	0.00508	10.07195	0.16460	0.16554	0.00220	2357	27	2441	40	2513	22
LJ-1.82	0.93	0.13802	0.00165	1.34678	0.02607	0.07087	0.00119	833	10	866	17	954	34
LJ-1.83	1.14	0.12587	0.00158	1.19914	0.02897	0.06900	0.00144	764	10	800	19	899	43
LJ-1.84	0.93	0.14360	0.00179	1.33952	0.02743	0.06764	0.00117	865	11	863	18	858	36

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
LJ-1.85	0.82	0.14089	0.00173	1.29669	0.02268	0.06673	0.00092	850	10	844	15	829	29
LJ-1.86	0.91	0.14302	0.00174	1.31940	0.02298	0.06694	0.00094	862	10	854	15	836	29
LJ-1.87	1.01	0.13289	0.00158	1.22235	0.02472	0.06678	0.00118	804	10	811	16	831	37
LJ-1.88	0.86	0.12727	0.00153	1.22691	0.02095	0.07001	0.00098	772	9	813	14	929	29
LJ-1.89	0.87	0.13492	0.00164	1.22841	0.02290	0.06614	0.00104	816	10	814	15	811	33
LJ-1.90	2.04	0.13953	0.00179	1.35111	0.03256	0.06988	0.00137	842	11	868	21	925	40
LJ-1.91	0.80	0.12998	0.00160	1.24805	0.02478	0.06976	0.00119	788	10	823	16	921	35
LJ-1.92	0.87	0.12653	0.00151	1.13690	0.02727	0.06515	0.00141	768	9	771	18	779	46
LJ-1.93	1.05	0.14052	0.00174	1.37916	0.02351	0.07121	0.00095	848	11	880	15	963	27
LJ-1.94	0.90	0.14066	0.00186	1.27364	0.02864	0.06577	0.00128	848	11	834	19	799	41
LJ-1.95	0.96	0.12717	0.00157	1.12251	0.02139	0.06410	0.00103	772	10	764	15	745	34
LJ-1.96	1.29	0.12358	0.00156	1.56979	0.03854	0.09165	0.00183	751	10	958	24	1460	38
LJ-1.97	1.29	0.13057	0.00156	1.26941	0.02142	0.07051	0.00095	791	9	832	14	943	28
LJ-1.98	1.03	0.14226	0.00175	1.47385	0.02815	0.07527	0.00123	857	11	920	18	1076	33
LJ-1.99	1.10	0.12578	0.00153	1.12901	0.02434	0.06500	0.00121	764	9	767	17	774	39
LJ-1.100	1.06	0.12862	0.00161	1.16427	0.02127	0.06569	0.00098	780	10	784	14	796	31
H1.1	2.17	0.27326	0.00339	3.69243	0.06609	0.09809	0.00142	1557	19	1570	28	1588	27
H1.2	0.21	0.37460	0.00467	6.47899	0.11469	0.12542	0.00175	2051	26	2043	36	2035	25
H1.3	1.75	0.47378	0.00580	10.66113	0.18608	0.16324	0.00227	2500	31	2494	44	2490	23
H1.4	0.62	0.56850	0.00805	18.48813	0.34995	0.23568	0.00325	2902	41	3015	57	3091	22
H1.5	0.61	0.62691	0.00746	22.12474	0.37855	0.25608	0.00354	3137	37	3189	55	3223	22
H1.6	0.60	0.60721	0.00745	18.31903	0.31968	0.21892	0.00305	3059	38	3007	52	2973	22
H1.7	0.51	0.52484	0.00643	13.01896	0.22628	0.18007	0.00251	2720	33	2681	47	2654	23
H1.8	1.64	0.14027	0.00168	1.68251	0.04884	0.08702	0.00237	846	10	1002	29	1361	53
H1.9	0.41	0.37805	0.00455	6.71179	0.11943	0.12884	0.00187	2067	25	2074	37	2082	26
H1.10	0.39	0.26358	0.00323	5.05715	0.08978	0.13933	0.00202	1508	18	1829	32	2219	25
H1.11	0.57	0.50379	0.00610	12.22503	0.21604	0.17618	0.00254	2630	32	2622	46	2617	24
H1.12	0.45	0.12419	0.00145	1.59715	0.02846	0.09321	0.00136	755	9	969	17	1492	28

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1σ	$^{207}\text{Pb}/^{235}\text{U}$	1σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1σ	$^{206}\text{Pb}/^{238}\text{U}$	1σ	$^{207}\text{Pb}/^{235}\text{U}$	1σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1σ
H1.13	0.24	0.37036	0.00430	9.96782	0.16974	0.19532	0.00273	2031	24	2432	41	2787	23
H1.14	0.58	0.36690	0.00439	6.10948	0.10456	0.12087	0.00168	2015	24	1992	34	1969	25
H1.15	0.53	0.49801	0.00610	12.08032	0.20830	0.17608	0.00243	2605	32	2611	45	2616	23
H1.16	1.65	0.50405	0.00600	12.29623	0.21318	0.17706	0.00251	2631	31	2627	46	2626	24
H1.17	0.61	0.54537	0.00666	13.69445	0.23651	0.18222	0.00252	2806	34	2729	47	2673	23
H1.18	0.78	0.48528	0.00564	11.74881	0.19892	0.17576	0.00247	2550	30	2585	44	2613	23
H1.19	0.55	0.48412	0.00603	11.60973	0.20519	0.17400	0.00245	2545	32	2573	45	2596	23
H1.20	1.26	0.53299	0.00653	13.19160	0.23732	0.17957	0.00263	2754	34	2693	48	2649	24
H1.21	0.94	0.33908	0.00423	5.09972	0.09503	0.10911	0.00167	1882	24	1836	34	1785	28
H1.22	0.47	0.51978	0.00639	12.51878	0.22074	0.17463	0.00246	2698	33	2644	47	2602	23
H1.23	0.86	0.52759	0.00629	13.09280	0.22507	0.18000	0.00251	2731	33	2686	46	2653	23
H1.24	0.67	0.47101	0.00573	11.05414	0.23068	0.16876	0.00273	2488	30	2528	53	2545	27
H1.25	1.64	0.33600	0.00403	5.20363	0.09176	0.11231	0.00162	1867	22	1853	33	1837	26
H1.26	0.91	0.54860	0.00650	15.66318	0.27230	0.20680	0.00288	2819	33	2856	50	2881	23
H1.27	1.21	0.36561	0.00457	6.00662	0.10489	0.11913	0.00165	2009	25	1977	35	1943	25
H1.28	0.52	0.50730	0.00604	12.51151	0.21295	0.17882	0.00247	2645	31	2644	45	2642	23
H1.29	0.63	0.54542	0.00676	14.68952	0.25680	0.19521	0.00271	2806	35	2795	49	2787	23
H1.30	0.73	0.48277	0.00602	11.82568	0.20830	0.17766	0.00252	2539	32	2591	46	2631	24
H1.31	0.63	0.52196	0.00641	14.21377	0.24785	0.19745	0.00277	2707	33	2764	48	2805	23
H1.32	0.52	0.59144	0.00744	16.89578	0.29606	0.20714	0.00287	2995	38	2929	51	2883	23
H1.33	1.35	0.32327	0.00396	5.09431	0.12355	0.11418	0.00248	1806	22	1835	45	1867	39
H1.34	1.31	0.13681	0.00165	1.18623	0.03580	0.06304	0.00181	827	10	794	24	710	61
H1.35	0.51	0.35823	0.00431	5.95875	0.10042	0.12063	0.00163	1974	24	1970	33	1966	24
H1.36	0.97	0.32868	0.00411	5.29985	0.09544	0.11703	0.00172	1832	23	1869	34	1911	26
H1.37	1.83	0.31675	0.00373	4.94020	0.09275	0.11312	0.00181	1774	21	1809	34	1850	29
H1.38	0.44	0.49429	0.00573	13.02596	0.21456	0.19111	0.00256	2589	30	2682	44	2752	22
H1.39	0.43	0.14309	0.00179	1.36861	0.02827	0.06936	0.00121	862	11	876	18	910	36
H1.40	1.16	0.35546	0.00429	5.97965	0.10150	0.12201	0.00166	1961	24	1973	33	1986	24

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1σ	$^{207}\text{Pb}/^{235}\text{U}$	1σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1σ	$^{206}\text{Pb}/^{238}\text{U}$	1σ	$^{207}\text{Pb}/^{235}\text{U}$	1σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1σ
H1.41	0.44	0.32359	0.00483	12.38659	0.23120	0.27806	0.00376	1807	27	2634	49	3352	21
H1.42	0.65	0.15193	0.00182	1.90208	0.04157	0.09127	0.00186	912	11	1082	24	1452	39
H1.43	0.94	0.13388	0.00168	1.32252	0.03378	0.07168	0.00163	810	10	856	22	977	46
H1.44	0.88	0.32821	0.00398	5.10122	0.09656	0.11278	0.00180	1830	22	1836	35	1845	29
H1.45	1.09	0.31944	0.00382	5.05779	0.10404	0.11482	0.00206	1787	21	1829	38	1877	32
H1.46	1.28	0.36160	0.00421	6.16187	0.10467	0.12360	0.00173	1990	23	1999	34	2009	25
H1.47	0.60	0.04603	0.00054	0.41956	0.00854	0.06592	0.00113	290	3	356	7	804	36
H1.48	0.97	0.42006	0.00508	8.74394	0.15059	0.15098	0.00209	2261	27	2312	40	2357	24
H1.49	0.84	0.13353	0.00160	1.26031	0.02443	0.06844	0.00113	808	10	828	16	882	34
H1.50	0.46	0.51810	0.00633	12.95567	0.22987	0.18145	0.00262	2691	33	2676	47	2666	24
H1.51	0.68	0.46075	0.00543	10.58390	0.18346	0.16663	0.00237	2443	29	2487	43	2524	24
H1.52	0.69	0.14759	0.00175	1.49270	0.02958	0.07341	0.00126	887	10	927	18	1025	35
H1.53	0.55	0.49359	0.00577	12.14177	0.20610	0.17853	0.00250	2586	30	2615	44	2639	23
H1.54	0.84	0.54594	0.00638	15.82985	0.26562	0.21043	0.00289	2808	33	2867	48	2909	22
H1.55	1.27	0.51337	0.00617	13.21837	0.22692	0.18682	0.00259	2671	32	2695	46	2714	23
H1.56	1.52	0.13922	0.00175	1.45544	0.03562	0.07562	0.00162	840	11	912	22	1085	43
H1.57	1.08	0.60221	0.00720	19.57662	0.33249	0.23585	0.00322	3039	36	3071	52	3092	22
H1.58	0.66	0.38280	0.00466	6.50720	0.11191	0.12334	0.00170	2089	25	2047	35	2005	24
H1.59	0.55	0.51804	0.00619	12.92851	0.22185	0.18109	0.00252	2691	32	2674	46	2663	23
H1.60	2.24	0.13233	0.00166	1.63652	0.03124	0.09061	0.00169	801	10	984	19	1438	36
H1.61	0.79	0.60896	0.00720	20.97124	0.36041	0.24987	0.00352	3066	36	3137	54	3184	22
H1.62	0.60	0.52997	0.00648	13.53145	0.23455	0.18526	0.00258	2741	34	2717	47	2701	23
H1.63	0.69	0.15694	0.00189	1.58926	0.03048	0.07348	0.00120	940	11	966	19	1027	33
H1.64	6.08	0.37476	0.00471	6.51254	0.11708	0.12605	0.00181	2052	26	2048	37	2044	25
H1.65	0.52	0.59136	0.00724	17.20742	0.29374	0.21108	0.00286	2995	37	2946	50	2914	22
H1.66	1.85	0.33178	0.00385	5.81121	0.10121	0.12700	0.00183	1847	21	1948	34	2057	25
H1.67	0.57	0.49655	0.00599	12.07674	0.20492	0.17636	0.00239	2599	31	2610	44	2619	23
H1.68	0.60	0.53925	0.00660	13.85781	0.23653	0.18636	0.00252	2780	34	2740	47	2710	22

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
H1.69	0.77	0.14037	0.00169	1.50059	0.03215	0.07747	0.00145	847	10	931	20	1133	37
H1.70	0.94	0.52125	0.00620	13.27471	0.22626	0.18467	0.00256	2704	32	2699	46	2695	23
H1.71	0.91	0.41684	0.00485	18.01089	0.30226	0.31337	0.00431	2246	26	2990	50	3538	21
H1.72	0.16	0.44717	0.00532	11.30155	0.19206	0.18324	0.00251	2383	28	2548	43	2682	23
H1.73	0.48	0.52370	0.00628	13.20591	0.22259	0.18287	0.00247	2715	33	2694	45	2679	22
H1.74	0.07	0.37281	0.00449	6.45386	0.10854	0.12557	0.00169	2043	25	2040	34	2037	24
H1.75	1.44	0.35100	0.00442	5.70486	0.09735	0.11814	0.00164	1939	24	1932	33	1928	25
H1.76	0.56	0.53173	0.00672	13.24203	0.22777	0.18061	0.00240	2749	35	2697	46	2658	22
H1.77	0.65	0.61156	0.00753	20.01795	0.34069	0.23734	0.00316	3076	38	3092	53	3102	21
H1.78	0.28	0.33816	0.00453	5.83367	0.10296	0.12521	0.00167	1878	25	1951	34	2032	24
H1.79	0.70	0.22933	0.00352	5.14538	0.09725	0.16309	0.00219	1331	20	1844	35	2488	23
H1.80	1.32	0.14179	0.00173	1.38273	0.02731	0.07081	0.00120	855	10	882	17	952	35
H1.81	0.30	0.55987	0.00674	15.67616	0.26431	0.20316	0.00274	2866	34	2857	48	2852	22
H1.82	0.80	0.38676	0.00475	6.85421	0.12129	0.12863	0.00185	2108	26	2093	37	2079	25
H1.83	0.44	0.55462	0.00691	14.65761	0.25107	0.19173	0.00256	2844	35	2793	48	2757	22
H1.84	0.38	0.57462	0.00719	18.02766	0.32356	0.22698	0.00310	2927	37	2991	54	3031	22
H1.85	0.57	0.34267	0.00419	5.59139	0.09664	0.11835	0.00162	1899	23	1915	33	1932	25
H1.86	0.39	0.45603	0.00770	11.43198	0.23243	0.18215	0.00247	2422	41	2559	52	2672	22
H1.87	0.63	0.37012	0.00446	6.19945	0.10539	0.12156	0.00166	2030	24	2004	34	1979	24
H1.88	0.64	0.35401	0.00466	6.12172	0.11074	0.12542	0.00173	1954	26	1993	36	2035	24
H1.89	0.62	0.52680	0.00626	14.00754	0.24274	0.19288	0.00270	2728	32	2750	48	2767	23
H1.90	1.23	0.49281	0.00589	12.45038	0.22080	0.18330	0.00265	2583	31	2639	47	2683	24
H1.91	0.61	0.15321	0.00181	4.08490	0.07279	0.19321	0.00277	919	11	1651	29	2770	24
H1.92	0.25	0.34815	0.00522	8.32171	0.16687	0.17305	0.00243	1926	29	2267	45	2587	23
H1.93	0.56	0.47432	0.00550	11.57065	0.19513	0.17705	0.00246	2502	29	2570	43	2625	23
H1.94	0.73	0.49548	0.00645	12.24799	0.22043	0.17919	0.00247	2594	34	2624	47	2645	23
H1.95	2.37	0.33185	0.00397	5.86602	0.09962	0.12829	0.00176	1847	22	1956	33	2075	24
H1.96	0.39	0.36566	0.00687	9.10582	0.20375	0.18066	0.00247	2009	38	2349	53	2659	23

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
H1.97	0.23	0.23600	0.00454	5.87883	0.13955	0.17983	0.00249	1366	26	1958	46	2651	23
H1.98	0.38	0.37333	0.00451	6.47297	0.11200	0.12576	0.00175	2045	25	2042	35	2040	25
H1.99	0.86	0.57080	0.00731	14.78472	0.26386	0.18797	0.00265	2911	37	2801	50	2724	23
H1.100	0.33	0.35596	0.00419	6.16342	0.10690	0.12560	0.00179	1963	23	1999	35	2037	25
LJW-1.1	0.60	0.13570	0.00165	1.24811	0.02638	0.06663	0.00121	820	10	823	17	826	38
LJW-1.2	0.14	0.36238	0.00435	6.23087	0.10444	0.12472	0.00166	1993	24	2009	34	2025	24
LJW-1.3	0.93	0.13672	0.00172	1.28001	0.02621	0.06794	0.00118	826	10	837	17	867	36
LJW-1.4	1.09	0.10875	0.00130	0.94172	0.01896	0.06286	0.00111	665	8	674	14	704	37
LJW-1.5	1.77	0.13291	0.00160	1.20763	0.02365	0.06591	0.00110	804	10	804	16	803	35
LJW-1.6	0.78	0.31449	0.00391	4.57905	0.07834	0.10564	0.00142	1763	22	1745	30	1726	25
LJW-1.7	0.98	0.13095	0.00157	1.25082	0.03716	0.06930	0.00194	793	10	824	24	908	58
LJW-1.8	1.35	0.15050	0.00208	2.77678	0.09732	0.12936	0.00361	904	13	1349	47	2089	49
LJW-1.9	0.77	0.15204	0.00195	1.49604	0.02798	0.07130	0.00105	912	12	929	17	966	30
LJW-1.10	1.94	0.38026	0.00455	6.46000	0.11320	0.12325	0.00177	2077	25	2040	36	2004	25
LJW-1.11	2.20	0.15204	0.00189	1.43245	0.02951	0.06829	0.00119	912	11	903	19	878	36
LJW-1.12	1.63	0.14203	0.00179	1.29455	0.02542	0.06634	0.00114	856	11	843	17	817	36
LJW-1.13	2.04	0.36306	0.00458	6.52303	0.12304	0.13099	0.00220	1997	25	2049	39	2111	29
LJW-1.14	1.25	0.13914	0.00177	1.43927	0.05626	0.07391	0.00263	2111	29	905	35	1039	72
LJW-1.15	1.99	0.36216	0.00434	6.14729	0.10649	0.12318	0.00174	1992	24	1997	35	2003	25
LJW-1.16	0.64	0.49788	0.00605	11.14400	0.18665	0.16240	0.00214	2605	32	2535	42	2481	22
LJW-1.17	1.28	0.13857	0.00164	1.30818	0.02738	0.06860	0.00128	837	10	849	18	887	39
LJW-1.18	1.26	0.14342	0.00181	1.36779	0.02754	0.06906	0.00114	864	11	875	18	901	34
LJW-1.19	1.75	0.13254	0.00160	1.11350	0.03046	0.06092	0.00154	802	10	760	21	637	54
LJW-1.20	1.39	0.13473	0.00161	1.37129	0.03672	0.07390	0.00185	815	10	877	23	1039	51
LJW-1.21	0.95	0.14180	0.00174	1.29954	0.02365	0.06652	0.00099	855	10	846	15	823	31
LJW-1.22	1.02	0.11136	0.00137	0.94322	0.01700	0.06152	0.00091	681	8	675	12	657	32
LJW-1.23	1.14	0.11183	0.00134	0.94282	0.02281	0.06118	0.00135	683	8	674	16	646	47
LJW-1.24	1.24	0.36984	0.00440	6.39838	0.10898	0.12560	0.00175	2029	24	2032	35	2037	25

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
LJW-1.25	1.09	0.37226	0.00448	6.29729	0.10726	0.12274	0.00167	2040	25	2018	34	1996	24
LJW-1.26	1.02	0.13766	0.00167	1.22814	0.02226	0.06475	0.00097	831	10	813	15	766	32
LJW-1.27	0.51	0.37069	0.00446	6.38549	0.10883	0.12501	0.00172	2033	24	2030	35	2029	24
LJW-1.28	0.89	0.15394	0.00183	1.44940	0.02495	0.06832	0.00096	923	11	910	16	878	29
LJW-1.29	0.65	0.47589	0.00611	10.65796	0.19061	0.16245	0.00227	2509	32	2494	45	2481	24
LJW-1.30	0.64	0.13294	0.00158	1.23631	0.02648	0.06748	0.00129	805	10	817	18	853	40
LJW-1.31	0.61	0.13629	0.00171	1.23994	0.02361	0.06609	0.00105	824	10	819	16	809	33
LJW-1.32	1.20	0.13996	0.00172	1.30637	0.02728	0.06767	0.00121	844	10	849	18	858	37
LJW-1.33	1.53	0.13556	0.00171	1.20124	0.04174	0.06426	0.00206	820	10	801	28	750	68
LJW-1.34	0.59	0.14185	0.00167	1.34259	0.02821	0.06862	0.00127	855	10	864	18	887	38
LJW-1.35	1.06	0.13423	0.00161	1.23247	0.02669	0.06674	0.00130	812	10	815	18	830	41
LJW-1.36	0.69	0.48069	0.00585	10.57213	0.18287	0.15957	0.00222	2530	31	2486	43	2451	24
LJW-1.37	2.07	0.14179	0.00170	1.37007	0.02798	0.07016	0.00125	855	10	876	18	933	37
LJW-1.38	1.26	0.51429	0.00624	13.61171	0.23873	0.19193	0.00271	2675	32	2723	48	2759	23
LJW-1.39	1.36	0.13397	0.00163	1.23886	0.04183	0.06742	0.00226	810	10	818	28	851	70
LJW-1.40	1.89	0.38817	0.00498	6.59636	0.12299	0.12328	0.00184	2114	27	2059	38	2004	26
LJW-1.41	0.96	0.14308	0.00173	1.36239	0.02476	0.06911	0.00104	862	10	873	16	902	31
LJW-1.42	0.68	0.49940	0.00595	11.44083	0.19602	0.16619	0.00231	2611	31	2560	44	2520	23
LJW-1.43	1.31	0.13653	0.00163	1.24821	0.02534	0.06626	0.00116	825	10	823	17	814	37
LJW-1.44	1.30	0.14117	0.00168	1.31703	0.02620	0.06766	0.00117	851	10	853	17	858	36
LJW-1.45	2.35	0.37088	0.00455	6.43761	0.11799	0.12599	0.00191	2034	25	2037	37	2043	27
LJW-1.46	0.71	0.13294	0.00163	1.19903	0.03116	0.06549	0.00155	805	10	800	21	790	50
LJW-1.47	1.89	0.13908	0.00169	1.29935	0.02413	0.06779	0.00105	839	10	845	16	862	32
LJW-1.48	1.08	0.34926	0.00411	5.96783	0.10237	0.12392	0.00173	1931	23	1971	34	2013	25
LJW-1.49	1.48	0.13342	0.00156	1.23301	0.02923	0.06709	0.00145	807	9	816	19	841	45
LJW-1.50	0.73	0.14190	0.00170	1.37520	0.02775	0.07031	0.00122	855	10	878	18	937	36
LJW-1.51	0.63	0.14424	0.00178	1.28094	0.03721	0.06440	0.00173	869	11	837	24	755	57
LJW-1.52	1.13	0.15490	0.00188	1.47583	0.03218	0.06908	0.00132	928	11	921	20	901	39

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
LJW-1.53	0.88	0.13863	0.00169	1.45868	0.03116	0.07608	0.00135	837	10	913	20	1097	36
LJW-1.54	0.60	0.13599	0.00161	1.31492	0.03282	0.07015	0.00161	822	10	852	21	933	47
LJW-1.55	0.81	0.14884	0.00195	1.34777	0.02653	0.06587	0.00110	894	12	867	17	802	35
LJW-1.56	0.62	0.14447	0.00176	1.32948	0.03236	0.06694	0.00149	870	11	859	21	836	46
LJW-1.57	0.99	0.13765	0.00171	1.24636	0.02507	0.06580	0.00114	831	10	822	17	800	36
LJW-1.58	1.02	0.13027	0.00153	1.17468	0.02275	0.06549	0.00111	789	9	789	15	790	36
LJW-1.59	1.02	0.14244	0.00170	1.31943	0.02814	0.06710	0.00124	858	10	854	18	841	39
LJW-1.60	1.14	0.13799	0.00166	1.26591	0.02879	0.06655	0.00135	833	10	831	19	824	42
LJW-1.61	1.20	0.13915	0.00167	1.29694	0.02314	0.06759	0.00099	840	10	844	15	856	30
LJW-1.62	0.86	0.14996	0.00186	1.42444	0.02772	0.06888	0.00112	901	11	899	17	895	34
LJW-1.63	1.93	0.13641	0.00165	1.27823	0.03930	0.06816	0.00199	824	10	836	26	873	61
LJW-1.64	1.06	0.47942	0.00572	10.56025	0.17680	0.15986	0.00217	2525	30	2485	42	2454	23
LJW-1.65	1.91	0.37512	0.00452	6.45979	0.11904	0.12497	0.00193	2053	25	2040	38	2028	27
LJW-1.66	1.14	0.13194	0.00166	1.17065	0.02535	0.06447	0.00122	799	10	787	17	757	40
LJW-1.67	1.27	0.14388	0.00182	1.40628	0.03075	0.07115	0.00139	867	11	892	19	962	40
LJW-1.68	1.46	0.39884	0.00498	6.89359	0.11939	0.12536	0.00171	2164	27	2098	36	2034	24
LJW-1.69	0.80	0.14626	0.00188	1.39134	0.02592	0.06902	0.00104	880	11	885	16	899	31
LJW-1.70	3.24	0.37811	0.00455	6.58011	0.11307	0.12626	0.00176	2067	25	2057	35	2047	25
LJW-1.71	0.74	0.47582	0.00573	11.12406	0.19147	0.16957	0.00236	2509	30	2534	44	2553	23
LJW-1.72	0.26	0.14591	0.00173	1.40664	0.02548	0.06999	0.00108	878	10	892	16	928	32
LJW-1.73	1.26	0.13116	0.00156	1.21556	0.02156	0.06719	0.00098	795	9	808	14	844	30
LJW-1.74	2.08	0.38072	0.00469	6.52476	0.11631	0.12427	0.00178	2080	26	2049	37	2018	25
LJW-1.75	1.04	0.50004	0.00621	10.98942	0.18950	0.15941	0.00217	2614	32	2522	43	2449	23
LJW-1.76	0.88	0.18773	0.00225	1.96711	0.03457	0.07604	0.00110	1109	13	1104	19	1096	29
LJW-1.77	0.88	0.13639	0.00167	1.36225	0.03358	0.07248	0.00162	824	10	873	22	999	45
LJW-1.78	0.99	0.12896	0.00152	1.30761	0.02478	0.07364	0.00122	782	9	849	16	1032	33
LJW-1.79	1.55	0.31822	0.00383	4.61092	0.07958	0.10522	0.00150	1781	21	1751	30	1718	26
LJW-1.80	1.00	0.11725	0.00134	1.08440	0.01949	0.06711	0.00103	715	8	746	13	841	32

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
LJW-2.1	1.05	0.13988	0.00171	1.28550	0.02345	0.06666	0.00100	844	10	839	15	827	31
LJW-2.2	0.81	0.10548	0.00172	0.94366	0.02058	0.06488	0.00101	646	11	675	15	770	33
LJW-2.3	0.68	0.49887	0.00602	11.15784	0.19041	0.16224	0.00222	2609	31	2536	43	2479	23
LJW-2.4	0.80	0.13725	0.00164	1.24416	0.02349	0.06579	0.00106	829	10	821	15	800	34
LJW-2.5	1.54	0.34576	0.00413	5.83763	0.10200	0.12248	0.00176	1914	23	1952	34	1993	25
LJW-2.6	0.90	0.13090	0.00153	1.23331	0.02237	0.06828	0.00103	793	9	816	15	877	31
LJW-2.7	1.00	0.13913	0.00167	1.26117	0.02263	0.06578	0.00098	840	10	828	15	799	31
LJW-2.8	0.69	0.54081	0.00668	13.83406	0.24055	0.18548	0.00254	2787	34	2738	48	2702	23
LJW-2.9	1.23	0.55609	0.00725	14.75111	0.26440	0.19237	0.00266	2850	37	2799	50	2763	23
LJW-2.10	1.01	0.14771	0.00177	1.39088	0.02614	0.06828	0.00108	888	11	885	17	877	33
LJW-2.11	1.00	0.13531	0.00161	1.18451	0.02523	0.06360	0.00122	818	10	793	17	728	41
LJW-2.12	1.20	0.13736	0.00165	1.31453	0.02699	0.06945	0.00124	830	10	852	17	912	37
LJW-2.13	0.82	0.15190	0.00180	1.42078	0.03577	0.06774	0.00156	912	11	898	23	861	48
LJW-2.14	1.14	0.13121	0.00156	1.17827	0.02897	0.06509	0.00145	795	9	791	19	777	47
LJW-2.15	1.01	0.36402	0.00441	6.08853	0.11258	0.12140	0.00188	2001	24	1989	37	1977	28
LJW-2.16	0.97	0.13939	0.00161	1.49387	0.03112	0.07815	0.00154	841	10	928	19	1151	39
LJW-2.17	1.62	0.32992	0.00393	5.05105	0.09009	0.11109	0.00165	1838	22	1828	33	1817	27
LJW-2.18	1.42	0.37204	0.00445	6.31736	0.11008	0.12313	0.00173	2039	24	2021	35	2002	25
LJW-2.19	0.93	0.13579	0.00163	1.29829	0.02485	0.06943	0.00114	821	10	845	16	912	34
LJW-2.20	1.96	0.13142	0.00159	1.16960	0.03244	0.06453	0.00164	796	10	786	22	759	54
LJW-2.21	1.84	0.14375	0.00176	1.41851	0.03405	0.07149	0.00152	866	11	897	22	971	43
LJW-2.22	1.03	0.13646	0.00169	1.24413	0.03436	0.06615	0.00168	825	10	821	23	811	53
LJW-2.23	3.54	0.37389	0.00461	6.39098	0.11168	0.12401	0.00173	2048	25	2031	35	2015	25
LJW-2.24	1.35	0.14186	0.00173	1.32501	0.02625	0.06795	0.00119	855	10	857	17	867	36
LJW-2.25	1.26	0.14810	0.00176	1.39345	0.02494	0.06825	0.00101	890	11	886	16	876	31
LJW-2.26	1.69	0.37995	0.00480	6.64124	0.12325	0.12668	0.00187	2076	26	2065	38	2052	26
LJW-2.27	1.38	0.13952	0.00171	1.32398	0.03795	0.06886	0.00184	842	10	856	25	895	55
LJW-2.28	1.79	0.14264	0.00173	1.33344	0.05085	0.06779	0.00246	860	10	860	33	862	75

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
LJW-2.29	1.00	0.38571	0.00472	6.74431	0.11852	0.12686	0.00180	2103	26	2078	37	2055	25
LJW-2.30	1.11	0.13822	0.00172	1.16587	0.03263	0.06134	0.00160	835	10	785	22	651	56
LJW-2.31	0.67	0.49845	0.00587	12.46159	0.21679	0.18136	0.00260	2607	31	2640	46	2665	24
LJW-2.32	0.94	0.14819	0.00181	1.38218	0.03362	0.06759	0.00147	891	11	881	21	856	45
LJW-2.33	0.81	0.15713	0.00192	1.49894	0.03047	0.06926	0.00123	941	12	930	19	906	37
LJW-2.34	0.42	0.47369	0.00550	11.47720	0.19376	0.17580	0.00244	2500	29	2563	43	2614	23
LJW-2.35	1.24	0.13035	0.00156	1.17943	0.02892	0.06571	0.00147	790	9	791	19	797	47
LJW-2.36	1.07	0.13305	0.00161	1.26535	0.05273	0.06898	0.00277	805	10	830	35	898	83
LJW-2.37	0.72	0.14631	0.00175	1.45773	0.02911	0.07232	0.00125	880	11	913	18	995	35
LJW-2.38	0.96	0.13180	0.00156	1.20752	0.02309	0.06645	0.00108	798	9	804	15	821	34
LJW-2.39	1.41	0.36528	0.00437	6.48073	0.11591	0.12869	0.00189	2007	24	2043	37	2080	26
LJW-2.40	0.64	0.47645	0.00569	10.84299	0.19326	0.16511	0.00243	2512	30	2510	45	2509	25
LJW-2.41	0.87	0.49564	0.00627	11.20026	0.20622	0.16397	0.00244	2595	33	2540	47	2497	25
LJW-2.42	0.96	0.13650	0.00167	1.26016	0.02606	0.06693	0.00119	825	10	828	17	835	37
LJW-2.43	1.01	0.13484	0.00166	1.25367	0.02327	0.06741	0.00102	815	10	825	15	851	31
LJW-2.44	0.93	0.14121	0.00174	1.29551	0.02400	0.06655	0.00102	851	10	844	16	824	32
LJW-2.45	0.68	0.14881	0.00174	1.40645	0.02497	0.06856	0.00101	894	10	892	16	885	31
LJW-2.46	1.34	0.13258	0.00170	1.23327	0.03478	0.06738	0.00167	803	10	816	23	849	52
LJW-2.47	1.50	0.14054	0.00174	1.27075	0.03350	0.06546	0.00155	848	10	833	22	789	50
LJW-2.48	1.29	0.13597	0.00166	1.20571	0.02554	0.06432	0.00119	822	10	803	17	752	39
LJW-2.49	0.63	0.14433	0.00173	1.35150	0.02654	0.06801	0.00116	869	10	868	17	869	35
LJW-2.50	0.93	0.14765	0.00189	1.41507	0.03210	0.06925	0.00130	888	11	895	20	906	39
LJW-2.51	1.85	0.36814	0.00453	6.30184	0.11501	0.12417	0.00184	2021	25	2019	37	2017	26
LJW-2.52	1.02	0.13472	0.00162	1.22349	0.02378	0.06589	0.00109	815	10	811	16	803	35
LJW-2.53	2.39	0.14468	0.00176	1.38806	0.02777	0.06965	0.00120	871	11	884	18	918	35
LJW-2.54	1.05	0.48471	0.00597	10.80552	0.19028	0.16164	0.00226	2548	31	2507	44	2473	24
LJW-2.55	1.50	0.13874	0.00169	1.41025	0.03317	0.07389	0.00159	838	10	893	21	1039	44
LJW-2.56	1.35	0.14244	0.00183	1.51612	0.04255	0.07636	0.00182	858	11	937	26	1104	48

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
LJW-2.57	1.00	0.13657	0.00178	1.21119	0.02592	0.06442	0.00119	825	11	806	17	755	39
LJW-2.58	2.27	0.13968	0.00168	1.30886	0.02384	0.06799	0.00103	843	10	850	15	868	32
LJW-2.59	0.76	0.46760	0.00550	10.42860	0.17573	0.16186	0.00224	2473	29	2474	42	2475	23
LJW-2.60	1.15	0.31753	0.00381	4.66167	0.08209	0.10655	0.00155	1778	21	1760	31	1741	27
W01.1	0.59	0.14017	0.00168	1.31363	0.02403	0.06792	0.00103	846	10	852	16	866	31
W01.2	2.34	0.37629	0.00443	6.41746	0.10806	0.12370	0.00169	2059	24	2035	34	2010	24
W01.3	0.97	0.52551	0.00629	13.31623	0.22356	0.18387	0.00248	2723	33	2702	45	2688	22
W01.4	1.88	0.13654	0.00160	1.28302	0.02328	0.06823	0.00106	825	10	838	15	875	32
W01.5	1.24	0.14183	0.00171	1.37970	0.03333	0.07062	0.00156	855	10	880	21	946	45
W01.6	0.80	0.49547	0.00605	11.47163	0.19429	0.16806	0.00227	2594	32	2562	43	2538	23
W01.7	0.77	0.13604	0.00164	1.27890	0.02273	0.06821	0.00099	822	10	836	15	875	30
W01.8	1.11	0.37765	0.00446	6.18370	0.11457	0.11884	0.00188	2065	24	2002	37	1939	28
W01.9	1.87	0.10710	0.00131	0.95232	0.02081	0.06450	0.00123	656	8	679	15	758	40
W01.10	0.77	0.14649	0.00180	1.31360	0.03620	0.06540	0.00167	881	11	852	23	787	54
W01.11	0.95	0.11352	0.00134	0.98950	0.01874	0.06326	0.00102	693	8	698	13	717	34
W01.12	0.89	0.46481	0.00575	10.35296	0.18298	0.16137	0.00222	2461	30	2467	44	2470	23
W01.13	1.03	0.14347	0.00168	1.38566	0.02416	0.07010	0.00102	864	10	883	15	931	30
W01.14	0.67	0.14144	0.00166	1.41375	0.02497	0.07252	0.00107	853	10	895	16	1000	30
W01.15	0.80	0.11669	0.00140	1.06603	0.02076	0.06634	0.00112	711	9	737	14	817	35
W01.16	0.73	0.13402	0.00161	1.29329	0.02203	0.07002	0.00097	811	10	843	14	929	28
W01.17	0.47	0.13258	0.00159	1.25053	0.02172	0.06844	0.00097	803	10	824	14	882	29
W01.18	0.91	0.13414	0.00169	1.21766	0.02391	0.06587	0.00108	811	10	809	16	802	34
W01.19	0.31	0.14229	0.00173	1.30581	0.02514	0.06654	0.00107	858	10	848	16	824	34
W01.20	1.24	0.13217	0.00164	1.17961	0.02166	0.06474	0.00097	800	10	791	15	766	31
W01.21	1.77	0.14019	0.00170	1.33566	0.03012	0.06917	0.00139	846	10	861	19	904	42
W01.22	1.13	0.13743	0.00167	1.31198	0.02971	0.06904	0.00134	830	10	851	19	900	40
W01.23	0.75	0.13691	0.00167	1.22870	0.02213	0.06513	0.00096	827	10	814	15	778	31
W01.24	0.43	0.48991	0.00584	11.01868	0.18571	0.16318	0.00221	2570	31	2525	43	2489	23

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
W01.25	1.05	0.13878	0.00162	1.31611	0.02275	0.06885	0.00100	838	10	853	15	894	30
W01.26	0.90	0.37692	0.00458	6.35233	0.10824	0.12228	0.00167	2062	25	2026	35	1990	24
W01.27	1.03	0.13071	0.00156	1.35846	0.04615	0.07542	0.00243	792	9	871	30	1080	65
W01.28	0.58	0.14549	0.00181	1.31808	0.02356	0.06576	0.00096	876	11	854	15	799	31
W01.29	1.10	0.13807	0.00167	1.22073	0.04490	0.06404	0.00224	834	10	810	30	743	74
W01.30	0.67	0.47891	0.00587	10.38890	0.18081	0.15735	0.00220	2522	31	2470	43	2427	24
W01.31	1.08	0.37661	0.00463	6.38496	0.11558	0.12294	0.00181	2060	25	2030	37	1999	26
W01.32	0.75	0.15080	0.00190	1.37153	0.02950	0.06598	0.00123	905	11	877	19	806	39
W01.33	0.91	0.13081	0.00154	1.20016	0.02089	0.06649	0.00094	792	9	801	14	822	30
W01.34	0.70	0.14926	0.00182	1.39444	0.02688	0.06781	0.00111	897	11	887	17	863	34
W01.35	0.90	0.37607	0.00451	6.32524	0.10717	0.12198	0.00166	2058	25	2022	34	1985	24
W01.36	1.38	0.13378	0.00162	1.17737	0.02652	0.06388	0.00129	809	10	790	18	738	43
W01.37	0.71	0.14183	0.00173	1.28010	0.02923	0.06543	0.00133	855	10	837	19	788	43
W01.38	1.34	0.13587	0.00175	1.41518	0.07972	0.07581	0.00421	821	11	895	50	1090	111
W01.39	0.81	0.13498	0.00159	1.31855	0.02809	0.07083	0.00136	816	10	854	18	952	39
W01.40	1.97	0.36628	0.00441	6.22519	0.10874	0.12327	0.00176	2012	24	2008	35	2004	25
W01.41	1.00	0.24112	0.00292	3.77723	0.06765	0.11347	0.00163	1393	17	1588	28	1856	26
W01.42	1.30	0.14235	0.00174	1.29960	0.02402	0.06618	0.00101	858	10	846	16	812	32
W01.43	0.73	0.14043	0.00167	1.25115	0.02939	0.06458	0.00136	847	10	824	19	761	45
W01.44	0.76	0.13318	0.00157	1.19660	0.02209	0.06519	0.00102	806	9	799	15	781	33
W01.45	0.84	0.13510	0.00161	1.20940	0.02223	0.06492	0.00100	817	10	805	15	772	32
W01.46	0.58	0.56493	0.00692	14.76865	0.25167	0.18972	0.00258	2887	35	2800	48	2740	22
W01.47	1.84	0.13159	0.00154	1.14980	0.02743	0.06342	0.00138	797	9	777	19	722	46
W01.48	1.04	0.37624	0.00454	6.49169	0.11432	0.12519	0.00180	2059	25	2045	36	2032	25
W01.49	0.76	0.28839	0.00361	3.81237	0.06775	0.09588	0.00135	1633	20	1595	28	1545	26
W01.50	0.68	0.12874	0.00153	1.15203	0.02772	0.06486	0.00138	781	9	778	19	770	45
W01.51	0.95	0.13170	0.00156	1.21228	0.02569	0.06685	0.00126	798	9	806	17	833	39
W01.52	1.51	0.13647	0.00159	1.26974	0.02549	0.06751	0.00118	825	10	832	17	853	36

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
W01.53	1.11	0.32160	0.00398	5.90489	0.11401	0.13355	0.00225	1798	22	1962	38	2145	29
W01.54	0.97	0.13665	0.00160	1.35728	0.02515	0.07213	0.00115	826	10	871	16	990	32
W01.55	1.13	0.14201	0.00168	1.32365	0.02445	0.06760	0.00105	856	10	856	16	856	32
W01.56	0.03	0.45923	0.00566	10.24273	0.17786	0.16167	0.00220	2436	30	2457	43	2473	23
W01.57	1.33	0.37247	0.00445	6.26955	0.10674	0.12213	0.00168	2041	24	2014	34	1988	24
W01.58	1.29	0.14815	0.00183	1.37091	0.02485	0.06712	0.00098	891	11	877	16	841	31
W01.59	1.76	0.37071	0.00435	6.33492	0.11317	0.12397	0.00185	2033	24	2023	36	2014	26
C2.1	1.18	0.13317	0.00160	1.24831	0.02371	0.06797	0.00108	806	10	823	16	868	33
C2.2	0.82	0.13661	0.00164	1.29756	0.02539	0.06898	0.00117	825	10	845	17	898	35
C2.3	0.73	0.14436	0.00182	1.35309	0.02794	0.06817	0.00122	869	11	869	18	874	37
C2.4	1.79	0.12998	0.00151	1.67366	0.03239	0.09358	0.00161	788	9	999	19	1500	33
C2.5	0.63	0.48990	0.00643	11.22345	0.20053	0.16620	0.00227	2570	34	2542	45	2520	23
C2.6	1.00	0.13771	0.00165	1.28825	0.02440	0.06790	0.00109	832	10	841	16	866	33
C2.7	0.92	0.13909	0.00168	1.34754	0.02919	0.07022	0.00132	840	10	866	19	935	39
C2.8	1.21	0.14238	0.00175	1.42044	0.02603	0.07236	0.00108	858	11	898	16	996	30
C2.9	1.56	0.35403	0.00428	6.34901	0.11378	0.13025	0.00194	1954	24	2025	36	2101	26
C2.10	2.06	0.12497	0.00148	1.12659	0.02530	0.06533	0.00131	759	9	766	17	785	42
C2.11	0.95	0.10796	0.00135	1.05955	0.02971	0.07091	0.00175	661	8	734	21	955	51
C2.12	0.79	0.12979	0.00154	1.19019	0.02458	0.06659	0.00121	787	9	796	16	825	38
C2.13	2.58	0.12806	0.00155	1.19354	0.03876	0.06774	0.00209	777	9	798	26	861	64
C2.14	0.74	0.11261	0.00136	0.96843	0.01766	0.06238	0.00094	688	8	688	13	687	32
C2.15	0.71	0.13693	0.00169	1.28165	0.02493	0.06790	0.00110	827	10	838	16	866	34
C2.16	0.84	0.13164	0.00160	1.20177	0.03384	0.06618	0.00172	797	10	801	23	812	54
C2.17	1.30	0.13935	0.00170	1.28054	0.02589	0.06668	0.00115	841	10	837	17	828	36
C2.18	1.50	0.11980	0.00146	1.76052	0.04591	0.10757	0.00276	729	9	1031	27	1759	47
C2.19	0.84	0.14679	0.00186	1.30165	0.02535	0.06439	0.00105	883	11	846	16	755	34
C2.20	1.33	0.14404	0.00182	1.32846	0.02352	0.06692	0.00094	867	11	858	15	835	29
C2.21	1.14	0.12464	0.00148	1.24805	0.03779	0.07252	0.00205	757	9	823	25	1000	57

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
C2.22	0.30	0.15215	0.00187	1.41675	0.02425	0.06756	0.00092	913	11	896	15	855	28
C2.23	0.84	0.42802	0.00533	9.46599	0.16268	0.16041	0.00216	2297	29	2384	41	2460	23
C2.24	1.23	0.14162	0.00170	1.31721	0.02322	0.06750	0.00098	854	10	853	15	853	30
C2.25	0.97	0.13811	0.00168	1.26623	0.02231	0.06653	0.00096	834	10	831	15	823	30
C2.26	0.97	0.13280	0.00166	1.15890	0.02298	0.06332	0.00106	804	10	781	15	719	35
C2.27	0.38	0.46869	0.00566	10.31118	0.17622	0.15957	0.00219	2478	30	2463	42	2451	23
C2.28	1.81	0.13256	0.00162	1.17706	0.02453	0.06439	0.00116	802	10	790	16	754	38
C2.29	1.72	0.33303	0.00421	5.07035	0.11040	0.11058	0.00210	1853	23	1831	40	1809	34
C2.30	1.46	0.11557	0.00141	0.95794	0.02015	0.06013	0.00110	705	9	682	14	608	40
C2.31	0.76	0.13565	0.00167	1.22958	0.02360	0.06572	0.00105	820	10	814	16	798	34
C2.32	0.63	0.16014	0.00207	1.53329	0.03275	0.06953	0.00127	958	12	944	20	915	38
C2.33	1.25	0.14048	0.00184	1.32102	0.03771	0.06805	0.00171	847	11	855	24	870	52
C2.34	1.13	0.12574	0.00148	1.14480	0.02280	0.06616	0.00117	764	9	775	15	812	37
C2.35	0.64	0.13327	0.00160	1.23715	0.02175	0.06732	0.00096	807	10	818	14	848	30
C2.36	0.88	0.13585	0.00162	1.25277	0.02293	0.06689	0.00102	821	10	825	15	834	32
C2.37	0.88	0.13187	0.00159	1.21721	0.02449	0.06696	0.00116	799	10	808	16	837	36
C2.38	0.67	0.13637	0.00164	1.25084	0.02203	0.06654	0.00095	824	10	824	15	823	30
C2.39	1.30	0.15895	0.00192	1.55183	0.03085	0.07088	0.00121	951	12	951	19	954	35
C2.40	1.22	0.13622	0.00169	1.26037	0.02528	0.06717	0.00115	823	10	828	17	843	36
C2.41	0.36	0.36085	0.00430	6.02281	0.10618	0.12112	0.00175	1986	24	1979	35	1973	26
C2.42	1.14	0.14616	0.00179	1.39236	0.02636	0.06914	0.00109	879	11	886	17	903	33
C2.43	1.46	0.12885	0.00155	1.24187	0.02889	0.06981	0.00143	781	9	820	19	923	42
C2.44	1.07	0.13629	0.00164	1.23469	0.02319	0.06572	0.00103	824	10	816	15	797	33
C2.45	0.89	0.13894	0.00169	1.26209	0.02272	0.06594	0.00098	839	10	829	15	804	31
C2.46	1.46	0.35820	0.00435	6.11445	0.11115	0.12387	0.00186	1974	24	1992	36	2013	27
C2.47	1.20	0.13680	0.00164	1.26264	0.02352	0.06694	0.00104	827	10	829	15	836	32
C2.48	1.06	0.45408	0.00547	10.18591	0.17492	0.16278	0.00226	2413	29	2452	42	2485	23
C2.49	0.64	0.14116	0.00172	1.33234	0.02364	0.06850	0.00099	851	10	860	15	884	30

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
C2.50	1.23	0.10590	0.00125	0.94575	0.01810	0.06471	0.00104	649	8	676	13	765	34
GC-19.1	0.62	0.64395	0.00797	23.55412	0.41468	0.26541	0.00373	3205	40	3250	57	3279	22
GC-19.2	0.36	0.15648	0.00199	1.48024	0.02779	0.06870	0.00106	937	12	922	17	890	32
GC-19.3	1.04	0.14803	0.00190	1.54651	0.03633	0.07509	0.00142	890	11	949	22	1071	38
GC-19.4	1.50	0.13504	0.00161	1.24082	0.02414	0.06666	0.00110	817	10	819	16	827	35
GC-19.5	1.11	0.42180	0.00565	9.33038	0.16714	0.16050	0.00217	2269	30	2371	42	2461	23
GC-19.6	0.61	0.43214	0.00535	9.26787	0.15942	0.15554	0.00209	2315	29	2365	41	2408	23
GC-19.7	1.76	0.13681	0.00162	1.22656	0.02282	0.06515	0.00104	827	10	813	15	779	34
GC-19.8	0.76	0.57076	0.00692	15.71334	0.26389	0.19983	0.00268	2911	35	2860	48	2825	22
GC-19.9	0.76	0.14622	0.00176	1.35233	0.02457	0.06720	0.00104	880	11	869	16	844	32
GC-19.10	0.53	0.49209	0.00597	10.87694	0.18499	0.16037	0.00218	2580	31	2513	43	2460	23
GC-19.11	0.54	0.52646	0.00647	12.93330	0.22172	0.17821	0.00242	2727	33	2675	46	2636	23
GC-19.12	1.29	0.12626	0.00148	1.15486	0.02013	0.06637	0.00096	767	9	780	14	818	30
GC-19.13	0.58	0.39927	0.00506	8.46391	0.14648	0.15372	0.00205	2166	27	2282	39	2388	23
GC-19.14	0.73	0.14948	0.00187	1.30271	0.02733	0.06334	0.00116	898	11	847	18	720	39
GC-19.15	0.78	0.14526	0.00173	1.35157	0.02518	0.06754	0.00107	874	10	868	16	854	33
GC-19.16	1.37	0.14190	0.00174	1.33537	0.02576	0.06829	0.00111	855	10	861	17	877	34
GC-19.17	0.88	0.37769	0.00459	6.34431	0.11115	0.12182	0.00172	2065	25	2025	35	1983	25
GC-19.18	0.83	0.14888	0.00202	1.44291	0.04260	0.07004	0.00178	895	12	907	27	930	52
GC-19.19	0.50	0.14161	0.00183	1.29068	0.02303	0.06619	0.00094	854	11	842	15	812	30
GC-19.20	0.52	0.12884	0.00156	1.21963	0.02259	0.06862	0.00104	781	9	810	15	887	31
GC-19.21	0.80	0.13870	0.00162	1.27321	0.02384	0.06663	0.00107	837	10	834	16	826	34
GC-19.22	1.19	0.14208	0.00183	1.39518	0.02652	0.07109	0.00105	856	11	887	17	960	30
GC-19.23	0.44	0.52615	0.00639	13.12219	0.22189	0.18097	0.00244	2725	33	2688	45	2662	22
GC-19.24	0.90	0.14400	0.00177	1.34683	0.02415	0.06783	0.00099	867	11	866	16	863	30
GC-19.25	0.94	0.13422	0.00161	1.26505	0.02978	0.06831	0.00144	812	10	830	20	878	44
GC-19.26	1.27	0.38340	0.00517	8.31144	0.14835	0.15723	0.00209	2092	28	2266	40	2426	23
GC-19.27	0.98	0.13810	0.00166	1.26905	0.02208	0.06667	0.00094	834	10	832	14	827	30

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
GC-19.28	0.82	0.57516	0.00698	17.69416	0.29674	0.22327	0.00299	2929	36	2973	50	3004	22
GC-19.29	0.85	0.14828	0.00184	1.34715	0.02521	0.06590	0.00102	891	11	866	16	803	32
GC-19.30	0.51	0.15777	0.00198	1.51877	0.03213	0.06980	0.00126	944	12	938	20	922	37
GC-19.31	0.61	0.45867	0.00615	10.29363	0.18489	0.16277	0.00220	2434	33	2462	44	2485	23
GC-19.32	0.92	0.14369	0.00181	1.28869	0.03655	0.06499	0.00172	865	11	841	24	774	56
GC-19.33	0.55	0.57720	0.00701	16.21781	0.27399	0.20386	0.00274	2937	36	2890	49	2857	22
GC-19.34	1.13	0.13148	0.00157	1.17288	0.02459	0.06472	0.00118	796	10	788	17	765	39
GC-19.35	0.47	0.46648	0.00599	11.16442	0.19426	0.17359	0.00231	2468	32	2537	44	2593	22
GC-19.36	0.15	0.45524	0.00538	9.88482	0.16407	0.15769	0.00214	2418	29	2424	40	2431	23
GC-19.37	0.34	0.53953	0.00647	13.55838	0.22753	0.18237	0.00246	2781	33	2719	46	2675	22
GC-19.38	0.85	0.14063	0.00169	1.29530	0.02649	0.06686	0.00119	848	10	844	17	833	37
GC-19.39	0.86	0.13931	0.00171	1.29988	0.02421	0.06772	0.00105	841	10	846	16	860	32
GC-19.40	1.13	0.39584	0.00498	6.99205	0.12286	0.12819	0.00178	2150	27	2110	37	2073	24
GC-19.41	0.78	0.13373	0.00156	1.24345	0.02197	0.06746	0.00099	809	9	820	14	852	31
GC-19.42	0.59	0.48886	0.00582	10.82762	0.18132	0.16085	0.00220	2566	31	2508	42	2465	23
GC-19.43	0.50	0.36410	0.00441	6.05255	0.10286	0.12060	0.00163	2002	24	1983	34	1965	24
GC-19.44	0.20	0.27217	0.00309	4.48826	0.07377	0.11964	0.00161	1552	18	1729	28	1951	24
GC-19.45	1.37	0.11800	0.00138	1.11917	0.01883	0.06884	0.00095	719	8	763	13	894	29
GC-19.46	0.92	0.13765	0.00164	1.29151	0.02235	0.06807	0.00096	831	10	842	15	871	29
GC-19.47	0.43	0.14678	0.00178	1.40130	0.02527	0.06926	0.00103	883	11	889	16	906	31
GC-19.48	1.37	0.32645	0.00387	5.06894	0.08673	0.11263	0.00156	1821	22	1831	31	1842	25
GC-19.49	1.20	0.13552	0.00164	1.25262	0.02192	0.06708	0.00096	819	10	825	14	840	30
GC-19.50	1.23	0.36760	0.00439	6.24915	0.10987	0.12338	0.00179	2018	24	2011	35	2006	26
YLZ-38.1	0.92	0.14083	0.00169	1.35632	0.02559	0.06975	0.00108	849	10	870	16	921	32
YLZ-38.2	1.35	0.13217	0.00153	1.49891	0.03243	0.08202	0.00151	800	9	930	20	1246	36
YLZ-38.3	1.27	0.13758	0.00167	1.21938	0.02305	0.06426	0.00100	831	10	809	15	750	33
YLZ-38.4	0.83	0.37399	0.00459	6.29589	0.10852	0.12213	0.00167	2048	25	2018	35	1988	24
YLZ-38.5	0.74	0.14708	0.00175	1.43746	0.03272	0.07093	0.00147	885	11	905	21	955	42

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
YLZ-38.6	1.39	0.13416	0.00172	1.19564	0.02874	0.06462	0.00136	812	10	799	19	762	44
YLZ-38.7	2.18	0.37827	0.00475	7.01610	0.14622	0.13360	0.00209	2068	26	2113	44	2146	27
YLZ-38.8	1.87	0.14459	0.00175	1.32854	0.02565	0.06662	0.00108	871	11	858	17	826	34
YLZ-38.9	1.31	0.35959	0.00428	5.90284	0.10208	0.11913	0.00170	1980	24	1962	34	1943	25
YLZ-38.10	0.71	0.14032	0.00166	1.35982	0.02361	0.07022	0.00098	846	10	872	15	935	29
YLZ-38.11	0.71	0.48385	0.00592	10.88604	0.18682	0.16318	0.00223	2544	31	2513	43	2489	23
YLZ-38.12	1.22	0.35442	0.00425	5.97987	0.10121	0.12238	0.00166	1956	23	1973	33	1991	24
YLZ-38.13	0.84	0.15733	0.00188	1.53260	0.03286	0.07082	0.00138	942	11	944	20	952	40
YLZ-38.14	1.23	0.12422	0.00149	1.26929	0.02972	0.07425	0.00162	755	9	832	19	1048	44
YLZ-38.15	1.14	0.13541	0.00165	1.25808	0.02216	0.06741	0.00097	819	10	827	15	851	30
YLZ-38.16	1.13	0.13425	0.00170	1.20094	0.02878	0.06517	0.00141	812	10	801	19	780	46
YLZ-38.17	1.04	0.13470	0.00163	1.17400	0.02962	0.06329	0.00146	815	10	789	20	718	49
YLZ-38.18	1.01	0.13127	0.00163	1.24155	0.02473	0.06842	0.00111	795	10	820	16	881	34
YLZ-38.19	0.72	0.36172	0.00434	6.00862	0.10475	0.12046	0.00172	1990	24	1977	34	1963	25
YLZ-38.20	1.32	0.13552	0.00164	1.21758	0.02377	0.06513	0.00108	819	10	809	16	779	35
YLZ-38.21	1.46	0.12622	0.00153	1.11654	0.01999	0.06423	0.00097	766	9	761	14	749	32
YLZ-38.22	0.88	0.12240	0.00144	1.08746	0.02104	0.06446	0.00108	744	9	747	14	757	35
YLZ-38.23	1.03	0.13028	0.00153	1.12874	0.02101	0.06285	0.00101	789	9	767	14	703	34
YLZ-38.24	0.85	0.37013	0.00552	7.71350	0.16402	0.14971	0.00216	2030	30	2198	47	2343	25
YLZ-38.25	0.77	0.14136	0.00168	1.35374	0.02362	0.06951	0.00101	852	10	869	15	914	30
YLZ-38.26	1.15	0.12480	0.00146	1.14191	0.01977	0.06637	0.00095	758	9	773	13	818	30
YLZ-38.27	1.60	0.13354	0.00166	1.21974	0.04125	0.06642	0.00210	808	10	810	27	820	66
YLZ-38.28	0.96	0.46202	0.00559	10.34892	0.18073	0.16242	0.00228	2448	30	2466	43	2481	24
YLZ-38.29	0.52	0.33344	0.00421	6.95564	0.12508	0.15125	0.00215	1855	23	2106	38	2360	24
YLZ-38.30	0.73	0.13553	0.00165	1.33725	0.02502	0.07155	0.00111	819	10	862	16	973	32
YLZ-38.31	0.99	0.13876	0.00165	1.48467	0.03390	0.07762	0.00160	838	10	924	21	1137	41
YLZ-38.32	0.97	0.38739	0.00500	8.50922	0.15389	0.15937	0.00227	2111	27	2287	41	2449	24
YLZ-38.33	0.84	0.13288	0.00160	1.19875	0.02319	0.06553	0.00109	804	10	800	15	791	35

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1σ	$^{207}\text{Pb}/^{235}\text{U}$	1σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1σ	$^{206}\text{Pb}/^{238}\text{U}$	1σ	$^{207}\text{Pb}/^{235}\text{U}$	1σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1σ
YLZ-38.34	1.62	0.13425	0.00168	1.32730	0.03206	0.07168	0.00151	812	10	858	21	977	43
YLZ-38.35	1.38	0.12684	0.00151	1.18481	0.02788	0.06773	0.00143	770	9	794	19	860	44
YLZ-38.36	1.06	0.13400	0.00160	1.20998	0.02250	0.06551	0.00103	811	10	805	15	791	33
YLZ-38.37	1.85	0.47032	0.00572	10.55144	0.18285	0.16277	0.00227	2485	30	2484	43	2485	24
YLZ-38.38	1.31	0.36916	0.00439	6.33541	0.11250	0.12453	0.00184	2025	24	2023	36	2022	26
YLZ-38.39	1.20	0.13754	0.00167	1.27878	0.02429	0.06744	0.00107	831	10	836	16	851	33
YLZ-38.40	1.03	0.33624	0.00413	5.73239	0.10072	0.12393	0.00182	1869	23	1936	34	2014	26
YLZ-38.41	0.25	0.14704	0.00175	1.37483	0.02679	0.06789	0.00115	884	11	878	17	865	35
YLZ-38.42	1.04	0.13899	0.00164	1.30522	0.02323	0.06810	0.00101	839	10	848	15	872	31
YLZ-38.43	1.36	0.13523	0.00175	1.16759	0.02601	0.06248	0.00117	818	11	786	17	691	40
YLZ-38.44	1.05	0.13316	0.00161	1.20341	0.02141	0.06552	0.00096	806	10	802	14	791	31
YLZ-38.45	3.04	0.13014	0.00158	1.05427	0.03836	0.05860	0.00199	789	10	731	27	552	74
YLZ-38.46	1.11	0.13673	0.00174	1.22150	0.02358	0.06487	0.00106	826	11	810	16	770	34
YLZ-38.47	0.83	0.13494	0.00163	1.28293	0.02925	0.06884	0.00139	816	10	838	19	894	42
YLZ-38.48	0.86	0.14038	0.00170	1.27210	0.02382	0.06572	0.00105	847	10	833	16	798	34
YLZ-38.49	1.23	0.13946	0.00175	1.21651	0.02451	0.06316	0.00106	842	11	808	16	714	36
YLZ-38.50	0.71	0.12758	0.00162	1.16471	0.02670	0.06621	0.00138	774	10	784	18	813	44
LJ-2.1	0.21	0.03560	0.48349	224.38578	188.55617	--	--	225	3063	5501	4623	--	--
LJ-2.2	3.02	--	--	--	--	0.20275	0.68596	--	--	--	--	2848	5511
LJ-2.3	0.47	0.14197	0.00173	1.32264	0.02277	0.06762	0.00094	856	10	856	15	857	29
LJ-2.4	0.28	0.33397	0.00389	6.89734	0.11897	0.14954	0.00204	1858	22	2098	36	2341	23
LJ-2.5	2.09	0.13112	0.00154	1.25295	0.02863	0.06910	0.00138	794	9	825	19	902	41
LJ-2.6	1.40	0.13150	0.00158	1.14021	0.03219	0.06293	0.00165	796	10	773	22	706	56
LJ-2.7	0.80	0.35286	0.00516	7.70582	0.16005	0.15737	0.00220	1948	28	2197	46	2428	24
LJ-2.8	1.34	0.13723	0.00164	1.27468	0.02247	0.06740	0.00098	829	10	834	15	850	30
LJ-2.9	1.88	0.13182	0.00153	2.00554	0.04723	0.10984	0.00227	798	9	1117	26	1797	38
LJ-2.10	0.42	0.29599	0.00378	4.93295	0.08858	0.12109	0.00179	1671	21	1808	32	1972	26
LJ-2.11	1.25	0.13945	0.00240	2.86243	0.20445	0.13321	0.00669	842	15	1372	98	2141	88

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
LJ-2.12	0.86	0.13007	0.00160	1.16722	0.02487	0.06525	0.00124	788	10	785	17	782	40
LJ-2.13	1.20	0.13266	0.00161	1.36200	0.03284	0.07418	0.00156	803	10	873	21	1046	42
LJ-2.14	1.11	0.13886	0.00170	1.26233	0.02181	0.06597	0.00091	838	10	829	14	805	29
LJ-2.15	0.80	0.15220	0.00183	1.55450	0.04011	0.07399	0.00176	913	11	952	25	1041	48
LJ-2.16	1.28	0.14302	0.00184	1.35885	0.02829	0.06891	0.00120	862	11	871	18	896	36
LJ-2.17	0.96	0.13032	0.00152	1.19829	0.02188	0.06666	0.00101	790	9	800	15	827	32
LJ-2.18	0.84	0.15215	0.00187	1.24829	0.06867	0.05955	0.00317	913	11	823	45	587	116
LJ-2.19	2.04	0.12701	0.00148	1.22697	0.02482	0.07017	0.00126	771	9	813	16	933	37
LJ-2.20	1.59	0.13523	0.00316	2.57301	0.09472	0.14013	0.00451	818	19	1293	48	2229	56
H103.1	0.37	0.36370	0.00495	9.07485	0.16289	0.18085	0.00241	2000	27	2346	42	2661	22
H103.2	0.66	0.64180	0.00781	21.13875	0.34891	0.23913	0.00317	3196	39	3145	52	3114	21
H103.3	1.04	0.14437	0.00174	1.28501	0.03050	0.06453	0.00139	869	10	839	20	759	45
H103.4	0.67	0.13472	0.00167	1.22017	0.02089	0.06566	0.00088	815	10	810	14	796	28
H103.5	0.89	0.38335	0.00464	6.45801	0.10911	0.12220	0.00165	2092	25	2040	34	1989	24
H103.6	0.85	0.24974	0.00300	6.44432	0.11026	0.18681	0.00248	1437	17	2038	35	2714	22
H103.7	0.50	0.17141	0.00228	3.26224	0.06664	0.13695	0.00199	1020	14	1472	30	2189	25
H103.8	1.04	0.14028	0.00165	1.34001	0.02251	0.06939	0.00098	846	10	863	15	910	29
H103.9	1.21	0.31967	0.00428	7.05854	0.12743	0.15992	0.00212	1788	24	2119	38	2455	22
H103.10	0.57	0.49249	0.00597	11.23866	0.18856	0.16556	0.00220	2581	31	2543	43	2513	22
H103.11	1.46	0.38404	0.00464	6.52127	0.10967	0.12317	0.00164	2095	25	2049	34	2003	24
H103.12	0.43	0.44185	0.00513	11.31184	0.18440	0.18577	0.00246	2359	27	2549	42	2705	22
H103.13	1.92	0.13679	0.00164	1.32692	0.02542	0.07038	0.00114	826	10	858	16	940	33
H103.14	0.47	0.54482	0.00666	13.64219	0.22867	0.18164	0.00239	2804	34	2725	46	2668	22
H103.15	0.25	0.12234	0.00142	1.61833	0.02652	0.09598	0.00127	744	9	977	16	1547	25
H103.16	1.12	0.49754	0.00658	11.68669	0.21216	0.16998	0.00226	2603	34	2580	47	2557	22
H103.17	0.85	0.25864	0.00298	5.08168	0.08216	0.14254	0.00187	1483	17	1833	30	2258	23
H103.18	0.79	0.49465	0.00598	10.97804	0.18281	0.16106	0.00214	2591	31	2521	42	2467	22
H103.19	0.76	0.30877	0.00416	5.89342	0.10515	0.13839	0.00183	1735	23	1960	35	2207	23

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
H103.20	1.03	0.39841	0.00476	6.74831	0.11253	0.12286	0.00163	2162	26	2079	35	1998	24
H103.21	0.77	0.14102	0.00168	1.31093	0.02380	0.06748	0.00103	850	10	851	15	853	32
H103.22	1.04	0.32959	0.00376	5.49588	0.08898	0.12098	0.00160	1836	21	1900	31	1971	24
H103.23	0.56	0.11717	0.00144	1.02647	0.02150	0.06370	0.00118	714	9	717	15	732	39
H103.24	0.88	0.13399	0.00164	1.20226	0.02257	0.06509	0.00101	811	10	802	15	777	33
H103.25	0.89	0.13558	0.00165	1.21400	0.02650	0.06496	0.00124	820	10	807	18	773	40
H103.26	0.59	0.51019	0.00608	12.65240	0.20756	0.17996	0.00235	2657	32	2654	44	2652	22
H103.27	0.57	0.52875	0.00645	13.23366	0.22076	0.18159	0.00238	2736	33	2696	45	2667	22
H103.28	2.00	0.38461	0.00472	6.64356	0.11174	0.12552	0.00171	2098	26	2065	35	2036	24
H103.29	2.10	0.11486	0.00143	1.08436	0.01912	0.06844	0.00095	701	9	746	13	882	29
H103.30	0.55	0.47335	0.00572	10.45134	0.17581	0.16018	0.00214	2498	30	2476	42	2458	23
H103.31	1.26	0.10002	0.00117	0.83775	0.01591	0.06081	0.00100	615	7	618	12	632	35
H103.32	1.50	0.36541	0.00444	6.22493	0.10388	0.12358	0.00163	2008	24	2008	34	2008	23
H103.33	0.92	0.13267	0.00160	1.22839	0.02247	0.06721	0.00103	803	10	814	15	844	32
H103.34	1.68	0.13238	0.00153	1.29211	0.02144	0.07082	0.00096	801	9	842	14	952	28
H103.35	0.86	0.33206	0.00377	7.04668	0.11304	0.15393	0.00201	1848	21	2117	34	2390	22
H103.36	0.10	0.55076	0.00706	14.83551	0.26704	0.19474	0.00258	2828	36	2805	50	2783	22
H103.37	0.94	0.49108	0.00607	11.25071	0.18849	0.16622	0.00217	2575	32	2544	43	2520	22
H103.38	1.32	0.37677	0.00447	6.43235	0.10656	0.12387	0.00165	2061	24	2037	34	2013	24
H103.39	1.40	0.11608	0.00142	1.15518	0.01944	0.07222	0.00096	708	9	780	13	992	27
H103.40	0.62	0.14694	0.00178	1.38391	0.02348	0.06834	0.00093	884	11	882	15	879	28
H103.41	1.82	0.37529	0.00468	6.31607	0.10875	0.12205	0.00163	2054	26	2021	35	1986	24
H103.42	1.48	0.14142	0.00171	1.42697	0.02746	0.07323	0.00121	853	10	900	17	1020	34
H103.43	1.70	0.13280	0.00167	1.22497	0.03553	0.06670	0.00172	804	10	812	24	828	54
H103.44	2.19	0.22497	0.00258	3.77654	0.06080	0.12179	0.00159	1308	15	1588	26	1983	23
H103.45	0.90	0.14196	0.00171	1.36903	0.02519	0.06989	0.00105	856	10	876	16	925	31
H103.46	0.86	0.31797	0.00526	6.54976	0.13787	0.14876	0.00195	1780	29	2053	43	2332	22
H103.47	0.89	0.38098	0.00465	6.44743	0.10859	0.12280	0.00163	2081	25	2039	34	1997	24

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
H103.48	0.94	0.14690	0.00181	1.51604	0.03499	0.07497	0.00155	884	11	937	22	1068	42
H103.49	1.05	0.13329	0.00193	2.42849	0.04837	0.13147	0.00178	807	12	1251	25	2118	24
H103.50	2.94	0.12889	0.00150	2.00450	0.03276	0.11286	0.00149	782	9	1117	18	1846	24
QSXX2.1	0.49	0.38976	0.00461	6.91989	0.11446	0.12882	0.00170	2122	25	2101	35	2082	23
QSXX2.2	0.86	0.10701	0.00129	0.91777	0.01799	0.06222	0.00104	655	8	661	13	682	36
QSXX2.3	1.11	0.10423	0.00127	0.89309	0.01623	0.06221	0.00094	639	8	648	12	681	32
QSXX2.4	0.85	0.14538	0.00181	1.43017	0.02735	0.07125	0.00110	875	11	902	17	965	31
QSXX2.5	1.08	0.10303	0.00117	1.29617	0.02111	0.09126	0.00121	632	7	844	14	1452	25
QSXX2.6	1.22	0.12570	0.00163	1.22451	0.02191	0.07075	0.00100	763	10	812	15	950	29
QSXX2.7	0.99	0.10104	0.00121	0.85938	0.01944	0.06171	0.00125	620	7	630	14	664	43
QSXX2.8	0.78	0.14574	0.00176	1.39385	0.02618	0.06936	0.00108	877	11	886	17	910	32
QSXX2.9	0.97	0.38454	0.00476	6.73042	0.11574	0.12704	0.00174	2097	26	2077	36	2057	24
QSXX2.10	1.05	0.10696	0.00128	0.88137	0.01966	0.05983	0.00120	655	8	642	14	598	44
QSXX2.12	0.76	0.10697	0.00134	0.96353	0.02403	0.06552	0.00148	655	8	685	17	791	48
QSXX2.13	0.92	0.13930	0.00161	1.31220	0.02294	0.06834	0.00100	841	10	851	15	879	30
QSXX2.14	0.90	0.38021	0.00465	6.77655	0.11341	0.12931	0.00170	2077	25	2083	35	2089	23
QSXX2.15	1.09	0.14575	0.00176	1.35036	0.02430	0.06719	0.00099	877	11	868	16	844	31
QSXX2.16	0.66	0.38963	0.00468	7.00561	0.11564	0.13048	0.00171	2121	25	2112	35	2104	23
QSXX2.17	1.45	0.15747	0.00190	1.50229	0.02545	0.06922	0.00094	943	11	931	16	905	28
QSXX2.18	0.95	0.38265	0.00450	6.85621	0.11352	0.13002	0.00174	2089	25	2093	35	2098	23
QSXX2.19	0.70	0.11103	0.00133	0.98335	0.02035	0.06425	0.00116	679	8	695	14	750	38
QSXX2.20	0.99	0.09839	0.00121	0.89381	0.01629	0.06582	0.00096	605	7	648	12	801	30
QSXX2.21	0.96	0.14629	0.00179	1.39111	0.02982	0.06899	0.00128	880	11	885	19	899	38
QSXX2.22	0.71	0.10637	0.00128	0.83935	0.02034	0.05720	0.00124	652	8	619	15	499	48
QSXX2.23	0.81	0.11061	0.00140	0.94865	0.02024	0.06234	0.00116	676	9	677	14	686	40
QSXX2.24	0.68	0.14377	0.00170	1.35820	0.02845	0.06855	0.00127	866	10	871	18	885	38
QSXX2.25	0.63	0.14944	0.00174	1.44361	0.02726	0.07011	0.00114	898	10	907	17	932	33
QSXX2.26	1.14	0.10783	0.00130	0.89157	0.01853	0.06007	0.00110	660	8	647	13	606	40

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
QSXX2.27	0.91	0.10257	0.00123	0.85484	0.01669	0.06044	0.00101	629	8	627	12	619	36
QSXX2.28	1.05	0.14199	0.00176	1.40384	0.02408	0.07175	0.00098	856	11	891	15	979	28
QSXX2.29	0.61	0.13572	0.00165	1.24540	0.02219	0.06665	0.00099	820	10	821	15	827	31
QSXX2.30	0.60	0.40975	0.00511	7.21714	0.12331	0.12779	0.00171	2214	28	2139	37	2068	24
QSXX2.31	0.50	0.11312	0.00140	0.98931	0.02038	0.06347	0.00112	691	9	698	14	724	37
QSXX2.32	0.54	0.15694	0.00186	1.51973	0.02668	0.07025	0.00102	940	11	938	16	936	30
QSXX2.33	0.81	0.15609	0.00187	1.52592	0.02630	0.07087	0.00097	935	11	941	16	954	28
QSXX2.34	0.90	0.14774	0.00183	1.39322	0.02516	0.06843	0.00100	888	11	886	16	882	30
QSXX2.35	0.69	0.11878	0.00137	1.21266	0.01997	0.07405	0.00098	724	8	806	13	1043	27
QSXX2.36	1.17	0.14451	0.00174	1.39208	0.02616	0.06987	0.00109	870	10	886	17	925	32
QSXX2.37	0.66	0.38770	0.00465	6.97982	0.11717	0.13071	0.00178	2112	25	2109	35	2108	24
QSXX2.38	0.65	0.14946	0.00187	1.43191	0.02693	0.06954	0.00108	898	11	902	17	915	32
QSXX2.39	0.50	0.11072	0.00139	0.89929	0.02014	0.05900	0.00116	677	8	651	15	567	43
QSXX2.40	0.92	0.14414	0.00168	1.55927	0.03206	0.07818	0.00134	868	10	954	20	1152	34
QSXX2.41	0.86	0.14069	0.00176	1.31630	0.02991	0.06795	0.00138	849	11	853	19	867	42
QSXX2.42	0.85	0.11095	0.00138	0.92826	0.01996	0.06063	0.00112	678	8	667	14	626	40
QSXX2.43	0.89	0.10714	0.00130	0.88896	0.01863	0.06031	0.00112	656	8	646	14	615	40
QSXX2.44	0.68	0.14034	0.00175	1.27040	0.02273	0.06567	0.00094	847	11	833	15	796	30
QSXX2.45	1.10	0.10214	0.00123	0.86759	0.01708	0.06153	0.00101	627	8	634	12	658	35
QSXX2.46	0.77	0.11268	0.00136	0.91499	0.02062	0.05886	0.00118	688	8	660	15	562	44
QSXX2.47	0.62	0.12729	0.00177	3.61200	0.10725	0.20132	0.00448	772	11	1552	46	2837	36
QSXX2.48	0.79	0.10890	0.00138	0.90382	0.02299	0.06023	0.00138	666	8	654	17	612	50
QSXX2.49	0.46	0.38385	0.00475	6.80503	0.11546	0.12861	0.00171	2094	26	2086	35	2079	23
QSXX2.50	0.96	0.13666	0.00163	1.33467	0.02407	0.07085	0.00106	826	10	861	16	953	31
QSXX2.51	0.94	0.14016	0.00162	1.32425	0.02494	0.06853	0.00110	846	10	856	16	885	33
QSXX2.52	0.56	0.21504	0.00277	3.92936	0.07020	0.13238	0.00179	1256	16	1620	29	2130	24
QSXX2.53	0.71	0.14537	0.00171	1.48210	0.02884	0.07389	0.00122	875	10	923	18	1039	33
QSXX2.54	0.76	0.10668	0.00134	0.96853	0.02236	0.06589	0.00133	653	8	688	16	803	42

Table S1. Zircon U-Pb age data

Sample	Th/U	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{238}\text{U}$	1 σ	$^{207}\text{Pb}/^{235}\text{U}$	1 σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1 σ
QSXX2.55	0.67	0.10939	0.00138	0.89364	0.01723	0.05929	0.00095	669	8	648	12	578	35
QSXX2.56	0.87	0.10583	0.00127	0.88664	0.01969	0.06073	0.00120	648	8	645	14	630	43
QSXX2.57	0.51	0.30074	0.00360	5.35255	0.08842	0.12911	0.00169	1695	20	1877	31	2086	23
QSXX2.58	0.65	0.42220	0.00520	8.63616	0.15852	0.14769	0.00206	2270	28	2300	42	2319	24
QSXX2.59	1.54	0.09652	0.00116	1.16433	0.01948	0.08753	0.00117	594	7	784	13	1372	26
QSXX2.60	0.95	0.39052	0.00483	6.93661	0.11754	0.12884	0.00170	2125	26	2103	36	2082	23

Table S2 in-situ Zircon Lu-Hf isotopic data

Sample	Age (Ma)	$^{176}\text{Yb}/^{177}\text{Hf}$	2σ	$^{176}\text{Lu}/^{177}\text{Hf}$	2σ	$^{176}\text{Hf}/^{177}\text{Hf}$	2σ	$\epsilon_{\text{Hf}}(t)$	T_{DM}^{C} (Ma)	$f_{\text{Lu/Hf}}$
LJ-1.2	836	0.04045	0.00114	0.00144	0.00003	0.28262	0.00002	12.4	956	-0.96
LJ-1.4	828	0.05131	0.00050	0.00181	0.00001	0.28261	0.00002	11.6	1006	-0.95
LJ-1.5	784	0.01712	0.00023	0.00064	0.00000	0.28189	0.00002	-14.3	2857	-0.98
LJ-1.11	2033	0.01646	0.00032	0.00051	0.00001	0.28131	0.00002	-7.1	3242	-0.98
LJ-1.12	761	0.02385	0.00068	0.00087	0.00001	0.28188	0.00003	-15.1	2897	-0.97
LJ-1.13	806	0.02331	0.00021	0.00092	0.00001	0.28257	0.00002	10.0	1108	-0.97
LJ-1.14	826	0.02932	0.00117	0.00109	0.00005	0.28259	0.00003	11.2	1034	-0.97
LJ-1.21	2512	0.01335	0.00014	0.00044	0.00001	0.28099	0.00002	-7.4	3608	-0.99
LJ-1.23	879	0.02652	0.00058	0.00095	0.00002	0.28213	0.00002	-3.8	2167	-0.97
LJ-1.25	917	0.02622	0.00049	0.00108	0.00003	0.28259	0.00002	13.0	970	-0.97
LJ-1.26	835	0.01496	0.00028	0.00054	0.00000	0.28245	0.00002	6.9	1361	-0.98
LJ-1.27	808	0.01965	0.00040	0.00070	0.00002	0.28245	0.00002	6.1	1392	-0.98
LJ-1.34	877	0.04023	0.00129	0.00141	0.00005	0.28234	0.00002	3.4	1642	-0.96
LJ-1.37	2524	0.01747	0.00024	0.00061	0.00001	0.28096	0.00002	-8.6	3701	-0.98
LJ-1.39	812	0.05651	0.00143	0.00205	0.00004	0.28269	0.00002	14.0	822	-0.94
LJ-1.40	2519	0.01062	0.00004	0.00037	0.00000	0.28088	0.00002	-11.1	3872	-0.99
LJ-1.50	801	0.10172	0.00204	0.00335	0.00008	0.28272	0.00003	14.0	812	-0.90
LJ-1.52	1188	0.02835	0.00036	0.00108	0.00002	0.28261	0.00002	19.8	676	-0.97
LJ-1.53	837	0.03623	0.00045	0.00140	0.00002	0.28262	0.00002	12.3	966	-0.96
LJ-1.58	848	0.05499	0.00071	0.00201	0.00003	0.28264	0.00002	13.0	921	-0.94
LJ-1.59	1935	0.01955	0.00006	0.00062	0.00000	0.28132	0.00002	-9.1	3309	-0.98
LJ-1.60	2513	0.01673	0.00024	0.00070	0.00001	0.28129	0.00002	2.8	2885	-0.98
LJ-1.65	813	0.03056	0.00013	0.00113	0.00001	0.28240	0.00002	4.2	1534	-0.97
LJ-1.66	838	0.02104	0.00027	0.00085	0.00001	0.28185	0.00002	-14.6	2916	-0.97
LJ-1.74	2498	0.01301	0.00028	0.00047	0.00001	0.28094	0.00002	-9.6	3754	-0.99
LJ-1.77	1945	0.01747	0.00015	0.00055	0.00000	0.28129	0.00002	-9.9	3370	-0.98
LJ-1.81	2513	0.01523	0.00019	0.00052	0.00000	0.28098	0.00002	-7.9	3641	-0.98

Table S2 in-situ Zircon Lu-Hf isotopic data

Sample	Age (Ma)	$^{176}\text{Yb}/^{177}\text{Hf}$	2σ	$^{176}\text{Lu}/^{177}\text{Hf}$	2σ	$^{176}\text{Hf}/^{177}\text{Hf}$	2σ	$\epsilon_{\text{Hf(t)}}$	T_{DM}^{C} (Ma)	$f_{\text{Lu/Hf}}$
LJ-1.90	842	0.02916	0.00079	0.00099	0.00002	0.28184	0.00002	-15.1	2950	-0.97
LJ-1.91	788	0.02728	0.00023	0.00108	0.00001	0.28252	0.00002	8.1	1235	-0.97
LJ-1.92	768	0.03905	0.00085	0.00144	0.00002	0.28260	0.00002	10.3	1061	-0.96
H1.2	2035	0.01241	0.00030	0.00049	0.00001	0.28110	0.00002	-14.4	3752	-0.99
H1.3	2490	0.01222	0.00011	0.00044	0.00000	0.28075	0.00002	-16.4	4218	-0.99
H1.9	2082	0.02743	0.00048	0.00102	0.00002	0.28167	0.00002	6.1	2336	-0.97
H1.10	2219	0.02770	0.00049	0.00112	0.00002	0.28077	0.00001	-22.8	4463	-0.97
H1.16	2626	0.01929	0.00028	0.00069	0.00001	0.28107	0.00002	-2.6	3350	-0.98
H1.17	2673	0.01574	0.00025	0.00054	0.00000	0.28104	0.00002	-2.3	3363	-0.98
H1.18	2613	0.01086	0.00034	0.00041	0.00001	0.28106	0.00002	-2.5	3334	-0.99
H1.21	1785	0.01138	0.00003	0.00041	0.00000	0.28119	0.00002	-16.6	3736	-0.99
H1.26	2881	0.00964	0.00021	0.00035	0.00000	0.28084	0.00002	-4.1	3643	-0.99
H1.27	1943	0.01317	0.00021	0.00049	0.00000	0.28134	0.00002	-7.8	3226	-0.99
H1.28	2642	0.02416	0.00043	0.00084	0.00002	0.28115	0.00002	0.5	3144	-0.97
H1.33	1867	0.01014	0.00030	0.00037	0.00001	0.28112	0.00002	-17.2	3833	-0.99
H1.34	827	0.01528	0.00015	0.00059	0.00000	0.28234	0.00002	2.7	1656	-0.98
H1.40	1986	0.00740	0.00013	0.00026	0.00000	0.28123	0.00002	-10.4	3441	-0.99
H1.43	810	0.03084	0.00053	0.00102	0.00001	0.28179	0.00002	-17.3	3083	-0.97
H1.46	2009	0.00943	0.00068	0.00031	0.00002	0.28126	0.00002	-9.0	3355	-0.99
H1.49	808	0.02545	0.00117	0.00088	0.00003	0.28203	0.00003	-8.8	2476	-0.97
H1.52	887	0.01969	0.00034	0.00080	0.00001	0.28205	0.00002	-6.5	2369	-0.98
H1.55	2714	0.01300	0.00042	0.00049	0.00001	0.28099	0.00002	-3.1	3451	-0.99
H1.56	840	0.08521	0.00261	0.00298	0.00010	0.28226	0.00003	-1.3	1939	-0.91
H1.57	3092	0.02455	0.00015	0.00103	0.00001	0.28082	0.00003	-1.3	3605	-0.97
H1.63	940	0.01237	0.00019	0.00054	0.00001	0.28256	0.00002	13.1	981	-0.98
H1.66	2057	0.01397	0.00014	0.00048	0.00001	0.28131	0.00003	-6.3	3198	-0.99
H1.70	2695	0.01793	0.00014	0.00064	0.00001	0.28101	0.00002	-3.0	3429	-0.98
H1.74	2037	0.00027	0.00001	0.00001	0.00000	0.28146	0.00002	-1.0	2811	-1.00

Table S2 in-situ Zircon Lu-Hf isotopic data

Sample	Age (Ma)	$^{176}\text{Yb}/^{177}\text{Hf}$	2σ	$^{176}\text{Lu}/^{177}\text{Hf}$	2σ	$^{176}\text{Hf}/^{177}\text{Hf}$	2σ	$\epsilon_{\text{Hf}}(t)$	T_{DM}^{C} (Ma)	$f_{\text{Lu/Hf}}$
H1.76	2658	0.02340	0.00044	0.00083	0.00002	0.28117	0.00002	1.5	3087	-0.98
H1.80	855	0.05706	0.00035	0.00224	0.00002	0.28216	0.00003	-4.1	2156	-0.93
H1.82	2079	0.02773	0.00054	0.00111	0.00003	0.28096	0.00002	-19.1	4108	-0.97
H1.84	3031	0.03253	0.00013	0.00115	0.00001	0.28126	0.00002	12.8	2575	-0.97
H1.93	2625	0.00956	0.00031	0.00036	0.00001	0.28095	0.00002	-6.2	3602	-0.99
LJW-1.1	820	0.03004	0.00006	0.00103	0.00000	0.28188	0.00002	-14.0	2853	-0.97
LJW-1.2	2025	0.00808	0.00007	0.00033	0.00000	0.28142	0.00002	-3.1	2952	-0.99
LJW-1.6	1726	0.02618	0.00027	0.00084	0.00001	0.28156	0.00002	-5.3	2890	-0.97
LJW-1.9	912	0.01516	0.00006	0.00060	0.00000	0.28240	0.00002	6.6	1437	-0.98
LJW-1.16	2481	0.00354	0.00004	0.00010	0.00000	0.28116	0.00002	-1.4	3161	-1.00
LJW-1.18	864	0.05002	0.00056	0.00177	0.00002	0.28242	0.00002	5.5	1475	-0.95
LJW-1.20	815	0.01599	0.00025	0.00063	0.00001	0.28189	0.00002	-13.4	2813	-0.98
LJW-1.25	1996	0.01215	0.00006	0.00042	0.00000	0.28126	0.00002	-9.3	3371	-0.99
LJW-1.31	824	0.02749	0.00038	0.00102	0.00001	0.28245	0.00002	6.3	1393	-0.97
LJW-1.34	855	0.02898	0.00092	0.00112	0.00003	0.28244	0.00003	6.4	1411	-0.97
LJW-1.38	2759	0.02302	0.00009	0.00071	0.00000	0.28082	0.00002	-8.4	3855	-0.98
LJW-1.39	810	0.01897	0.00008	0.00063	0.00000	0.28261	0.00002	11.9	976	-0.98
LJW-1.40	2004	0.01076	0.00075	0.00034	0.00002	0.28130	0.00003	-7.7	3258	-0.99
LJW-1.41	862	0.03818	0.00041	0.00133	0.00001	0.28254	0.00002	10.2	1139	-0.96
LJW-1.42	2520	0.01132	0.00031	0.00044	0.00001	0.28133	0.00002	4.7	2760	-0.99
LJW-1.56	870	0.03145	0.00034	0.00106	0.00001	0.28256	0.00002	11.2	1066	-0.97
LJW-1.61	840	0.04320	0.00036	0.00170	0.00002	0.28262	0.00002	12.3	964	-0.95
LJW-1.68	2034	0.01476	0.00060	0.00048	0.00002	0.28139	0.00002	-4.0	3018	-0.99
LJW-1.70	2047	0.01372	0.00018	0.00046	0.00001	0.28131	0.00002	-6.6	3212	-0.99
LJW-1.79	1718	0.03672	0.00059	0.00116	0.00002	0.28158	0.00002	-5.2	2869	-0.96
LJW-2.4	829	0.03355	0.00013	0.00132	0.00001	0.28261	0.00002	11.8	993	-0.96
LJW-2.8	2702	0.01689	0.00007	0.00060	0.00000	0.28102	0.00002	-2.5	3400	-0.98
LJW-2.9	2763	0.01591	0.00048	0.00061	0.00002	0.28099	0.00002	-2.0	3413	-0.98

Table S2 in-situ Zircon Lu-Hf isotopic data

Sample	Age (Ma)	$^{176}\text{Yb}/^{177}\text{Hf}$	2σ	$^{176}\text{Lu}/^{177}\text{Hf}$	2σ	$^{176}\text{Hf}/^{177}\text{Hf}$	2σ	$\epsilon_{\text{Hf(t)}}$	T_{DM}^{C} (Ma)	$f_{\text{Lu/Hf}}$
LJW-2.12	830	0.04119	0.00072	0.00152	0.00001	0.28253	0.00003	9.1	1193	-0.95
LJW-2.14	795	0.03573	0.00029	0.00133	0.00000	0.28239	0.00002	3.4	1580	-0.96
LJW-2.15	1977	0.01134	0.00021	0.00038	0.00000	0.28127	0.00002	-9.5	3366	-0.99
LJW-2.24	855	0.02189	0.00046	0.00085	0.00002	0.28248	0.00002	7.9	1296	-0.97
LJW-2.27	842	0.01981	0.00025	0.00074	0.00000	0.28185	0.00002	-14.5	2913	-0.98
LJW-2.32	891	0.03650	0.00155	0.00141	0.00004	0.28269	0.00002	16.1	725	-0.96
LJW-2.34	2614	0.01328	0.00048	0.00049	0.00001	0.28125	0.00002	3.9	2883	-0.99
LJW-2.40	2509	0.01468	0.00018	0.00052	0.00001	0.28099	0.00002	-7.6	3618	-0.98
LJW-2.41	2497	0.00943	0.00022	0.00035	0.00001	0.28119	0.00002	-0.7	3122	-0.99
LJW-2.42	825	0.06492	0.00086	0.00218	0.00004	0.28238	0.00002	3.2	1613	-0.93
LJW-2.43	815	0.02119	0.00113	0.00084	0.00004	0.28248	0.00002	7.4	1305	-0.97
LJW-2.44	851	0.03196	0.00067	0.00123	0.00003	0.28259	0.00002	11.7	1015	-0.96
LJW-2.46	803	0.04157	0.00106	0.00152	0.00003	0.28267	0.00002	13.4	855	-0.95
LJW-2.48	822	0.02601	0.00027	0.00087	0.00001	0.28195	0.00002	-11.4	2673	-0.97
LJW-2.54	2473	0.02724	0.00021	0.00090	0.00001	0.28118	0.00002	-2.2	3209	-0.97
LJW-2.59	2475	0.01484	0.00045	0.00057	0.00001	0.28102	0.00002	-7.4	3577	-0.98
LJW-2.60	1741	0.02406	0.00049	0.00083	0.00002	0.28154	0.00002	-5.7	2925	-0.98
W01.2	2010	0.02840	0.00105	0.00091	0.00003	0.28137	0.00003	-6.0	3139	-0.97
W01.3	2688	0.00949	0.00007	0.00034	0.00000	0.28101	0.00002	-2.6	3397	-0.99
W01.5	855	0.02068	0.00032	0.00075	0.00001	0.28231	0.00002	2.1	1718	-0.98
W01.7	822	0.03061	0.00028	0.00102	0.00002	0.28245	0.00002	6.2	1400	-0.97
W01.8	1939	0.01276	0.00025	0.00042	0.00001	0.28121	0.00002	-12.4	3549	-0.99
W01.10	881	0.02650	0.00078	0.00094	0.00002	0.28246	0.00003	8.0	1309	-0.97
W01.11	693	0.04445	0.00072	0.00143	0.00003	0.28254	0.00002	6.5	1276	-0.96
W01.13	864	0.02392	0.00011	0.00083	0.00000	0.28229	0.00002	1.6	1763	-0.98
W01.16	811	0.03289	0.00050	0.00123	0.00002	0.28244	0.00002	5.7	1428	-0.96
W01.17	803	0.08134	0.00104	0.00273	0.00005	0.28272	0.00002	14.6	771	-0.92
W01.23	827	0.03128	0.00015	0.00119	0.00001	0.28254	0.00002	9.6	1155	-0.96

Table S2 in-situ Zircon Lu-Hf isotopic data

Sample	Age (Ma)	$^{176}\text{Yb}/^{177}\text{Hf}$	2σ	$^{176}\text{Lu}/^{177}\text{Hf}$	2σ	$^{176}\text{Hf}/^{177}\text{Hf}$	2σ	$\epsilon_{\text{Hf}}(t)$	T_{DM}^{C} (Ma)	$f_{\text{Lu/Hf}}$
W01.25	838	0.01991	0.00021	0.00071	0.00001	0.28191	0.00002	-12.2	2745	-0.98
W01.26	1990	0.00980	0.00085	0.00032	0.00002	0.28130	0.00002	-8.0	3274	-0.99
W01.33	792	0.04411	0.00064	0.00157	0.00002	0.28254	0.00002	8.4	1211	-0.95
W01.35	1985	0.00937	0.00007	0.00032	0.00000	0.28135	0.00002	-6.2	3144	-0.99
W01.42	858	0.03952	0.00098	0.00148	0.00004	0.28213	0.00002	-4.6	2202	-0.96
W01.43	847	0.05247	0.00028	0.00175	0.00001	0.28265	0.00002	13.5	880	-0.95
W01.44	806	0.04031	0.00093	0.00144	0.00003	0.28254	0.00002	8.7	1203	-0.96
W01.45	817	0.04324	0.00069	0.00154	0.00003	0.28256	0.00002	9.8	1133	-0.95
W01.46	2740	0.02231	0.00113	0.00073	0.00003	0.28092	0.00002	-5.1	3609	-0.98
C2.1	806	0.02948	0.00011	0.00113	0.00001	0.28244	0.00002	5.5	1440	-0.97
C2.3	869	0.02957	0.00094	0.00110	0.00002	0.28258	0.00002	11.9	1018	-0.97
C2.5	2520	0.03354	0.00079	0.00118	0.00002	0.28116	0.00002	-2.6	3269	-0.96
C2.7	840	0.03891	0.00027	0.00142	0.00001	0.28258	0.00002	11.0	1064	-0.96
C2.9	2101	0.01736	0.00014	0.00057	0.00001	0.28128	0.00002	-6.5	3248	-0.98
C2.15	827	0.01504	0.00017	0.00061	0.00000	0.28245	0.00002	6.4	1386	-0.98
C2.16	797	0.02429	0.00022	0.00088	0.00001	0.28263	0.00002	12.3	935	-0.97
C2.17	841	0.02351	0.00039	0.00089	0.00001	0.28216	0.00002	-3.4	2112	-0.97
C2.20	867	0.04832	0.00131	0.00189	0.00005	0.28268	0.00002	15.0	789	-0.94
C2.26	804	0.01894	0.00030	0.00071	0.00001	0.28248	0.00002	7.1	1316	-0.98
C2.27	2451	0.01340	0.00008	0.00048	0.00000	0.28130	0.00002	2.2	2882	-0.99
C2.29	1809	0.00819	0.00011	0.00029	0.00000	0.28108	0.00002	-19.9	3982	-0.99
C2.32	958	0.02242	0.00007	0.00086	0.00000	0.28265	0.00002	16.4	752	-0.97
C2.33	847	0.01127	0.00016	0.00041	0.00000	0.28260	0.00002	12.3	973	-0.99
C2.42	879	0.02658	0.00041	0.00104	0.00002	0.28253	0.00002	10.4	1134	-0.97
GC-19.1	3279	0.02914	0.00055	0.00111	0.00002	0.28074	0.00002	0.0	3652	-0.97
GC-19.2	937	0.02075	0.00026	0.00095	0.00001	0.28264	0.00002	15.4	815	-0.97
GC-19.3	890	0.02053	0.00009	0.00083	0.00000	0.28231	0.00002	3.0	1681	-0.97
GC-19.8	2825	0.01840	0.00014	0.00064	0.00000	0.28093	0.00002	-2.8	3509	-0.98

Table S2 in-situ Zircon Lu-Hf isotopic data

Sample	Age (Ma)	$^{176}\text{Yb}/^{177}\text{Hf}$	2σ	$^{176}\text{Lu}/^{177}\text{Hf}$	2σ	$^{176}\text{Hf}/^{177}\text{Hf}$	2σ	$\epsilon_{\text{Hf}}(t)$	T_{DM}^{C} (Ma)	$f_{\text{Lu/Hf}}$
GC-19.12	767	0.03077	0.00070	0.00116	0.00003	0.28234	0.00002	0.9	1741	-0.97
GC-19.13	2388	0.01009	0.00014	0.00038	0.00000	0.28111	0.00002	-5.8	3403	-0.99
GC-19.20	781	0.02557	0.00056	0.00101	0.00002	0.28257	0.00002	9.5	1130	-0.97
GC-19.22	856	0.01947	0.00054	0.00072	0.00001	0.28202	0.00002	-8.0	2455	-0.98
GC-19.27	834	0.03263	0.00044	0.00117	0.00001	0.28209	0.00002	-6.5	2324	-0.96
GC-19.29	891	0.03487	0.00036	0.00127	0.00002	0.28195	0.00002	-10.1	2621	-0.96
GC-19.32	865	0.03882	0.00168	0.00140	0.00004	0.28249	0.00003	8.5	1262	-0.96
GC-19.34	796	0.04060	0.00017	0.00121	0.00000	0.28196	0.00002	-11.8	2677	-0.96
GC-19.37	2675	0.02620	0.00137	0.00091	0.00005	0.28109	0.00002	-1.1	3284	-0.97
GC-19.38	848	0.02079	0.00070	0.00079	0.00002	0.28239	0.00003	4.9	1510	-0.98
GC-19.48	1842	0.04156	0.00078	0.00129	0.00002	0.28134	0.00002	-11.3	3393	-0.96
YLZ-38.1	849	0.04278	0.00214	0.00164	0.00008	0.28265	0.00003	13.7	871	-0.95
YLZ-38.4	1988	0.00945	0.00033	0.00035	0.00001	0.28139	0.00002	-4.9	3052	-0.99
YLZ-38.10	846	0.04137	0.00064	0.00137	0.00003	0.28255	0.00002	10.1	1131	-0.96
YLZ-38.11	2489	0.00419	0.00004	0.00019	0.00000	0.28126	0.00002	2.0	2932	-0.99
YLZ-38.15	819	0.06928	0.00330	0.00233	0.00009	0.28271	0.00004	14.6	783	-0.93
YLZ-38.17	815	0.02455	0.00046	0.00084	0.00002	0.28216	0.00002	-4.3	2154	-0.97
YLZ-38.19	1963	0.00813	0.00084	0.00026	0.00002	0.28130	0.00002	-8.7	3302	-0.99
YLZ-38.30	819	0.02870	0.00153	0.00104	0.00005	0.28250	0.00002	7.9	1275	-0.97
YLZ-38.31	838	0.03795	0.00063	0.00133	0.00002	0.28250	0.00002	8.3	1254	-0.96
YLZ-38.32	2449	0.03142	0.00076	0.00104	0.00002	0.28109	0.00002	-6.2	3474	-0.97
YLZ-38.33	804	0.03753	0.00035	0.00140	0.00001	0.28256	0.00002	9.6	1134	-0.96
YLZ-38.36	811	0.03814	0.00065	0.00156	0.00003	0.28254	0.00002	9.0	1186	-0.95
YLZ-38.37	2485	0.01363	0.00034	0.00049	0.00001	0.28118	0.00002	-1.3	3159	-0.99
YLZ-38.39	831	0.05329	0.00115	0.00189	0.00003	0.28254	0.00002	9.3	1179	-0.94
YLZ-38.46	826	0.04909	0.00132	0.00184	0.00005	0.28253	0.00002	8.7	1219	-0.94
LJ-2.3	856	0.02486	0.00031	0.00090	0.00002	0.28246	0.00002	7.4	1333	-0.97
LJ-2.5	794	0.06878	0.00132	0.00240	0.00005	0.28260	0.00002	10.4	1072	-0.93

Table S2 in-situ Zircon Lu-Hf isotopic data

Sample	Age (Ma)	$^{176}\text{Yb}/^{177}\text{Hf}$	2σ	$^{176}\text{Lu}/^{177}\text{Hf}$	2σ	$^{176}\text{Hf}/^{177}\text{Hf}$	2σ	$\epsilon_{\text{Hf}}(t)$	T_{DM}^{C} (Ma)	$f_{\text{Lu/Hf}}$
LJ-2.6	796	0.04027	0.00065	0.00134	0.00002	0.28210	0.00002	-6.7	2314	-0.96
LJ-2.8	829	0.02220	0.00053	0.00081	0.00002	0.28260	0.00002	11.9	984	-0.98
LJ-2.10	--	--	--	--	--	--	--	--	--	--
LJ-2.12	788	0.03578	0.00015	0.00137	0.00001	0.28258	0.00002	10.0	1092	-0.96
LJ-2.13	803	0.02202	0.00079	0.00080	0.00003	0.28245	0.00002	5.9	1405	-0.98
LJ-2.14	838	0.05523	0.00116	0.00204	0.00004	0.28197	0.00002	-10.9	2634	-0.94
LJ-2.15	913	0.02200	0.00025	0.00082	0.00001	0.28262	0.00002	14.5	863	-0.98
LJ-2.16	862	0.07501	0.00102	0.00250	0.00003	0.28199	0.00003	-10.2	2595	-0.92
LJ-2.17	790	0.02906	0.00026	0.00112	0.00001	0.28259	0.00002	10.4	1070	-0.97
LJ-2.18	913	0.01556	0.00122	0.00069	0.00006	0.28260	0.00002	13.6	927	-0.98
LJ-2.19	771	0.07070	0.00109	0.00256	0.00002	0.28276	0.00002	15.2	703	-0.92
H103.2	3114	0.01679	0.00118	0.00055	0.00003	0.28086	0.00002	1.7	3411	-0.98
H103.4	815	0.07761	0.00036	0.00252	0.00001	0.28256	0.00002	9.0	1182	-0.92
H103.8	846	0.07491	0.00147	0.00239	0.00004	0.28234	0.00003	2.0	1711	-0.93
H103.13	826	0.08360	0.00195	0.00289	0.00006	0.28214	0.00002	-5.7	2247	-0.91
H103.14	2668	0.02234	0.00018	0.00077	0.00000	0.28118	0.00002	2.4	3034	-0.98
H103.20	1998	0.00887	0.00023	0.00032	0.00001	0.28121	0.00002	-11.1	3497	-0.99
H103.21	850	0.02107	0.00008	0.00077	0.00000	0.28240	0.00002	5.2	1494	-0.98
H103.22	1971	0.01151	0.00029	0.00041	0.00001	0.28127	0.00002	-9.5	3367	-0.99
H103.24	811	0.05405	0.00058	0.00199	0.00002	0.28205	0.00002	-8.6	2449	-0.94
H103.25	820	0.02686	0.00077	0.00100	0.00002	0.28256	0.00002	10.3	1100	-0.97
H103.28	2036	0.01553	0.00053	0.00053	0.00001	0.28118	0.00002	-11.5	3549	-0.98
H103.29	701	0.02403	0.00011	0.00096	0.00000	0.28206	0.00002	-10.1	2490	-0.97
H103.30	2458	0.00265	0.00008	0.00009	0.00000	0.28131	0.00003	3.3	2814	-1.00
H103.39	708	0.04180	0.00069	0.00144	0.00002	0.28262	0.00002	9.5	1075	-0.96
H103.45	856	0.02318	0.00018	0.00077	0.00000	0.28203	0.00002	-7.9	2449	-0.98
QSXX2.1	2082	0.01068	0.00013	0.00042	0.00000	0.28154	0.00002	2.5	2590	-0.99
QSXX2.2	655	0.02629	0.00010	0.00111	0.00000	0.28264	0.00002	9.3	1047	-0.97

Table S2 in-situ Zircon Lu-Hf isotopic data

Sample	Age (Ma)	$^{176}\text{Yb}/^{177}\text{Hf}$	2σ	$^{176}\text{Lu}/^{177}\text{Hf}$	2σ	$^{176}\text{Hf}/^{177}\text{Hf}$	2σ	$\epsilon_{\text{Hf}}(t)$	T_{DM}^{C} (Ma)	$f_{\text{Lu/Hf}}$
QSXX2.8	877	0.00994	0.00004	0.00043	0.00000	0.28237	0.00002	4.9	1535	-0.99
QSXX2.12	655	0.01751	0.00032	0.00073	0.00001	0.28261	0.00002	8.6	1104	-0.98
QSXX2.13	841	0.01809	0.00018	0.00077	0.00001	0.28243	0.00002	6.0	1430	-0.98
QSXX2.21	880	0.02590	0.00023	0.00104	0.00001	0.28242	0.00002	6.4	1422	-0.97
QSXX2.24	866	0.01758	0.00038	0.00075	0.00001	0.28246	0.00002	7.7	1321	-0.98
QSXX2.25	898	0.01475	0.00018	0.00059	0.00001	0.28240	0.00002	6.3	1445	-0.98
QSXX2.27	629	0.01983	0.00034	0.00081	0.00001	0.28262	0.00002	8.3	1106	-0.98
QSXX2.28	856	0.02076	0.00031	0.00078	0.00000	0.28253	0.00002	10.0	1149	-0.98
QSXX2.31	691	0.02179	0.00024	0.00092	0.00001	0.28262	0.00002	9.4	1067	-0.97
QSXX2.37	2108	0.01814	0.00031	0.00065	0.00001	0.28158	0.00002	4.2	2491	-0.98
QSXX2.39	677	0.01549	0.00022	0.00064	0.00001	0.28262	0.00002	9.2	1070	-0.98
QSXX2.42	678	0.02189	0.00064	0.00091	0.00003	0.28262	0.00003	9.3	1067	-0.97
QSXX2.44	847	0.02686	0.00037	0.00100	0.00001	0.28246	0.00002	7.0	1360	-0.97
QSXX2.46	688	0.00891	0.00005	0.00037	0.00000	0.28257	0.00002	7.9	1178	-0.99
QSXX2.49	2079	0.01390	0.00027	0.00052	0.00001	0.28156	0.00002	2.8	2571	-0.98
QSXX2.50	826	0.01204	0.00013	0.00043	0.00000	0.28247	0.00002	7.5	1307	-0.99
QSXX2.54	653	0.01675	0.00055	0.00072	0.00002	0.28260	0.00002	7.9	1150	-0.98
QSXX2.57	2086	0.02284	0.00039	0.00087	0.00001	0.28156	0.00002	2.4	2604	-0.97

Table S3. Sources for data compiled in Figure S1

No.	Sample No.	Rock type	Location	Dating method	Age (Ma)	σ	References
1	99KD33	Granitic gneiss	Huiqinggou, Kangdian Complex	SHRIMP zircon U-Pb	1007	14	Li et al. (2002)
2	TDH	Cu-sulfides	Dongchuan group	Re-Os model age	1432	19	Huang et al. (2013)
3	TDH	Cu-sulfides	Dongchuan group	Re-Os isochron age	1401	30	Huang et al. (2013)
4	TDH	Cu-sulfides	Dongchuan group	Re-Os isochron age	1397	71	Huang et al. (2013)
5	TSW1	Gabbro	Caiziyuan mélange	LA-ICP-MS zircon U-Pb	1375	7	Ren et al. (2017)
6	100629	Quartz keratophyre	Hekou group	LA-ICP-MS zircon U-Pb	1659	23	Geng et al. (2017)
7	100613	Tuff	Tianbao Formation	LA-ICP-MS zircon U-Pb	1018	11	Geng et al. (2017)
8	100617	Mafic dyke	Intruded into Tianbao Formation	LA-ICP-MS zircon U-Pb	1026	7	Geng et al. (2017)
9	L4RZ	Tuff	Limahe Formation	SHRIMP zircon U-Pb	1082	13	Yin et al. (2011b)
10	D0202	Tuff	Heishan Formation	SHRIMP zircon U-Pb	1503	7	Yin et al. (2011b)
11	X27RZ	Tuff	Tong'an Formation	SHRIMP zircon U-Pb	1061	25	Yin et al. (2011b)
12	D0177	Tuff	Heishantou Formation	SHRIMP zircon U-Pb	1047	15	Yin et al. (2011a)
13	D0237	Tuff	Tianbao Formation	SHRIMP zircon U-Pb	1036	12	Yin et al. (2012)
14	D0184	Tuff	Heishantou	SHRIMP zircon U-Pb	1031	12	Yin et al. (2012)
15	09KY06-1	Tuff	Heishan Formation	LA-ICP-MS zircon U-Pb	1499	7	Li et al. (2013b)
16	09KY06-2	Tuff	Heishan Formation	LA-ICP-MS zircon U-Pb	1500	4	Li et al. (2013b)
17	10HL01	Tuff	Tianbao Formation	LA-ICP-MS zircon U-Pb	1019	10	Li et al. (2013b)
18	09KY01	Tuff	Heishantou Formation	LA-ICP-MS zircon U-Pb	1042	7	Li et al. (2013b)
19	YN07-309	Tuff	Yimin Formation	LA-ICP-MS zircon U-Pb	1742	13	Zhao et al. (2010)
20	LL86	Tuff	Hekou group	LA-ICP-MS zircon U-Pb	1679	13	Chen et al. (2013)
21	LL203	Metagabbro	Intruded into Hekou group	LA-ICP-MS zircon U-Pb	1657	21	Chen et al. (2013)
22	XC67	Rhyolite	Tianbao Formation	LA-ICP-MS zircon U-Pb	1028	19	Geng et al. (2007)
23	100620-1	Gabro	Intruded into the Tong'an Formation	LA-ICP-MS zircon U-Pb	1513	21	Geng et al. (2012)
24	100620-2	Diorite	Intruded into the Tong'an Formation	LA-ICP-MS zircon U-Pb	1531	15	Geng et al. (2012)
25	03KD524	Tuff	Laowushan Formation	LA-ICP-MS zircon U-Pb	1142	16	Greentree et al. (2006)
26	02KD044	Tuff	Manganghe Formation	LA-ICP-MS zircon U-Pb	1675	8	Greentree and Li (2008)
27	G3-29	Tuff	Heishantou Formation	LA-ICP-MS zircon U-Pb	1032	9	Zhang et al. (2007)
28	CYZ1	Granite	Caiyuanzi	SHRIMP zircon U-Pb	1040	6	Wang et al. (2013b)

29	CYZ3	Granite	Caiyuanzi	SHRIMP zircon U-Pb	1063	10	Wang et al. (2013b)
30	TA02TW	Tuff	Tong'an Formation	LA-ICP-MS zircon U-Pb	1508	15	Pang et al. (2015)
31	JQ1010	Gabbro	Zhuping area	SIMS zircon U-Pb	1494	6	Fan et al. (2013)
32	JQ1002	Gabbro	Zhuping area	SIMS Baddeleyite U-Pb	1486	3	Fan et al. (2013)
33	JQ1010	Gabbro	Zhuping area	SIMS Baddeleyite U-Pb	1490	4	Fan et al. (2013)
34	14DHS06	Tuff	Luohanling Formation	SHRIMP zircon U-Pb	1225	19	Li et al. (2016)
35	14DHS09	Tuff	Luohanling Formation	SHRIMP zircon U-Pb	1239	23	Li et al. (2016)
36	11HB06-3	Tuff	Yemahe Formation	SHRIMP zircon U-Pb	1216	3	Li et al. (2013a)
37	11HB06-3	Tuff	Yemahe Formation	SHRIMP zircon U-Pb	1224	7	Li et al. (2013a)
38	11HB24	Gabbro	Gabbro	SHRIMP zircon U-Pb	1111	9	Li et al. (2013a)
39	11HB24	Gabbro	Gabbro	SHRIMP zircon U-Pb	1083	5	Li et al. (2013a)
40	SNJ007	Tuff	Shicaohe Formation	SHRIMP zircon U-Pb	1180	15	Du et al. (2016)
41	09JJQ	Basalt	Shennongjia group	LA-ICP-MS zircon U-Pb	1103	8	Qiu et al. (2011)
42	MCY-1	Tuff	Macaoyuan conglomerates	LA-ICP-MS zircon U-Pb	1157	19	Wang et al. (2013a)
43	12MCY41	Tuff	Macaoyuan conglomerates	LA-ICP-MS zircon U-Pb	1180	7	Wang et al. (2013a)
44	RPHP5	Basalt	Macaoyuan conglomerates	LA-ICP-MS zircon U-Pb	1139	29	Qiu et al. (2013)
45	HCQ1003	Dolerite	Intruded into the Huili group	LA-ICP-MS zircon U-Pb	1023	7	Zhu et al. (2016)
46	HCQ1308	Metavolcanic rocks	Huili group	LA-ICP-MS zircon U-Pb	1025	13	Zhu et al. (2016)
47	KMZ1001	Metavolcanic rocks	Huili group	LA-ICP-MS zircon U-Pb	1021	6	Zhu et al. (2016)
48	15YN-68B	Gabbro	Diancangshan complex	LA-ICP-MS zircon U-Pb	1433	24	This study
49	15YN-28B	Amphibolite	Ailaoshan compex	LA-ICP-MS zircon U-Pb	1150	33	This study
50	15YN-24B	Monzogranite	Ailaoshan compex	LA-ICP-MS zircon U-Pb	1134	22	This study
51	09LaLa04	Tuffaceous schist	Luodang Formation	LA-ICP-MS zircon U-Pb	1669	6	Zhu et al. (2013)
52	TBS04	Rhyolite	Huili group	MC-ICP-MS zircon U-Pb	1052	9	Chen et al. (2018)
53	YM1204	Dacite	Julin area	MC-ICP-MS zircon U-Pb	1072	14	Chen et al. (2018)
54	TBS20	Dacite	Huili group	MC-ICP-MS zircon U-Pb	1032	27	Chen et al. (2018)
55	YM1240	Granite	Julin area	MC-ICP-MS zircon U-Pb	1045	4	Chen et al. (2018)
56	TBS24	Dacite	Huili group	MC-ICP-MS zircon U-Pb	1063	41	Chen et al. (2018)
57	YM213	Granite	Julin area	MC-ICP-MS zircon U-Pb	1033	4	Chen et al. (2018)
58	13MWAP-34	Gabbro	Miaowan Ophiolite	LA-ICP-MS zircon U-Pb	1115	29	Deng et al. (2017)
59	a	Gabbro and diabase	Miaowan Ophiolite	Sm-Nd isochron age	1135	54	Deng et al. (2017)

60	2014SC52	Diabase	Northeastern Jiangxi Ophiolite	LA-ICP-MS zircon U-Pb	1014	4	Zhang et al. (2015)
61	2014SC67	Gabbro	Northeastern Jiangxi Ophiolite	LA-ICP-MS zircon U-Pb	1028	10	Zhang et al. (2015)
62	2014SC63	Pyroxenite	Northeastern Jiangxi Ophiolite	LA-ICP-MS zircon U-Pb	1060	30	Zhang et al. (2015)
63	SNJ23	Metabasalt	Shennongjia area	LA-ICP-MS zircon U-Pb	1063	15	Qiu et al. (2015)
64	Re-Os	Chalcopyrite	Yinachang deposit	Re-Os isochron age	1648	14	Hou et al. (2015)
65	YM93	Metabasalt	Julin group	LA-ICP-MS zircon U-Pb	1043	19	Chen et al. (2014)
66	YM94	Metabasalt	Julin group	LA-ICP-MS zircon U-Pb	1050	14	Chen et al. (2014)
67	a	Rhyrite	E'touchang deposit	Re-Os model age	1451	7	Zhao et al. (2013)
68	b	Rhyrite	E'touchang deposit	Rb-Sr isochron age	1453	28	Zhao et al. (2013)
69	c	Molybdenite	E'touchang deposit	Re-Os model age	1456	6	Zhao et al. (2013)
70	d	Molybdenite	E'touchang deposit	Re-Os model age	1447	7	Zhao et al. (2013)
71	e	Molybdenite	E'touchang deposit	Re-Os model age	1651	7	Zhao et al. (2013)
72	f	Molybdenite	E'touchang deposit	Re-Os model age	1656	7	Zhao et al. (2013)
73	g	Molybdenite	E'touchang deposit	Re-Os model age	1655	7	Zhao et al. (2013)
74	TDH	Cu-sulfides	Tangdan stratiform Cu deposit	Re-Os model age	1432	19	Huang et al. (2013)
75	TDH	Cu-sulfides	Tangdan stratiform Cu deposit	Re-Os isochron age	1401	30	Huang et al. (2013)
76	TDH	Cu-sulfides	Tangdan stratiform Cu deposit	Re-Os isochron age	1379	71	Huang et al. (2013)
77	08TSJ-6	Rhyolite	Tieshajie group	SHRIMP zircon U-Pb	1159	8	Li et al. (2013b)
78	09M042	Metagabbro	Miaowan Ophiolite	LA-ICP-MS zircon U-Pb	1118	24	Peng et al. (2012)
79	14HN-13C3	Metadiabase	Baoban complex	LA-ICP-MS zircon U-Pb	1436	10	Zhang et al. (2018)
80	14HN-13A1	Amphibolite	Baoban complex	LA-ICP-MS zircon U-Pb	1433	11	Zhang et al. (2018)
81	16HN-07A	Metagabbro	Baoban complex	LA-ICP-MS zircon U-Pb	1441	12	Zhang et al. (2018)
82	14HN-07B	Metagabbro	Baoban complex	LA-ICP-MS zircon U-Pb	1424	11	Zhang et al. (2018)
83	16HN-26A	Amphibolite	Baoban complex	LA-ICP-MS zircon U-Pb	1434	16	Zhang et al. (2018)
84	00SC70	Tuff	Shilu group	SHRIMP zircon U-Pb	1439	9	Li et al. (2008)
85	04HN04	Meta-volcaniclastics	Baoban complex	SHRIMP zircon U-Pb	1433	6	Li et al. (2008)
86	97HN36	Granodiorite	Baoban complex	SHRIMP zircon U-Pb	1436	7	Li et al. (2002)
87	97HN93	Gneissic granodiorite	Baoban complex	SHRIMP zircon U-Pb	1431	5	Li et al. (2002)
88	04HN03	Metarhyolite	Baoban complex	SHRIMP zircon U-Pb	1417	13	Yao et al. (2017)
89	12YN14-1	Orthogneiss	Baoban complex	SHRIMP zircon U-Pb	1432	29	Yao et al. (2017)
90	GA-3	Granitic gneiss	Baoban complex	LA-ICP-MS zircon U-Pb	1444	5	Zhang et al. (2017)

91	GA-4	Granitic gneiss	Baoban complex	LA-ICP-MS zircon U-Pb	1439	19	Zhang et al. (2017)
92	GA-8	Granitic gneiss	Baoban complex	LA-ICP-MS zircon U-Pb	1433	31	Zhang et al. (2017)
93	GA-9	Granitic gneiss	Baoban complex	LA-ICP-MS zircon U-Pb	1450	23	Zhang et al. (2017)

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