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Supplemental Material

Table S1. U-Pb dating results for zircons from the Xiwulanbulang tonalitic-trondhjemitic-granodioritic gneisses in the Yinshan block.

Table S2. Major-element (wt%) and trace-element (ppm) compositions of the Xiwulanbulang TTG gneisses in the Yinshan block.

Table S3. Zircon Hf isotopic data for the Xiwulanbulang TTG gneisses in the Yinshan block.

Table S4. Whole-rock Sr-Nd isotopic compositions of the Xiwulanbulang TTG gneisses in the Yinshan block.

Table S5. Whole-rock Pb isotopic compositions of the Xiwulanbulang TTG gneisses in the Yinshan block.

Table S1 U–Pb dating results for zircons from the XWLBL tonalitic-trondhjemitic-granodioritic gneisses in Yinshan block.

spots	Element(ppm)		Th/U	Ratios				Ages (Ma)							
	Th	U		²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ	²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ
Sample 19WC01-1															
19WC01-1-01	17.69	25.28	0.70	0.1644	0.0064	10.2105	0.3530	0.4566	0.0080	2502	66	2454	32	2425	35
19WC01-1-02	18.01	21.82	0.83	0.1697	0.0075	10.6294	0.4538	0.4567	0.0078	2555	74	2491	40	2425	35
19WC01-1-03	18.59	29.61	0.63	0.1520	0.0060	8.0696	0.3014	0.3859	0.0058	2369	67	2239	34	2104	27
19WC01-1-04	27.89	27.28	1.02	0.1639	0.0059	10.2912	0.3581	0.4566	0.0067	2498	66	2461	32	2424	30
19WC01-1-05	39.95	38.20	1.05	0.1760	0.0050	12.0300	0.3282	0.4950	0.0061	2617	47	2607	26	2592	26
19WC01-1-06	26.26	54.02	0.49	0.1599	0.0049	10.1932	0.2923	0.4639	0.0065	2455	52	2452	27	2457	29
19WC01-1-07	37.27	127.91	0.29	0.1671	0.0037	10.9679	0.2751	0.4727	0.0066	2529	38	2520	23	2495	29
19WC01-1-08	12.14	26.05	0.47	0.1524	0.0054	8.5705	0.3143	0.4047	0.0066	2374	55	2293	33	2191	30
19WC01-1-09	0.44	6.78	0.06	0.1717	0.0130	10.6530	0.7338	0.4696	0.0139	2574	127	2493	64	2482	61
19WC01-1-10	28.55	28.53	1.00	0.1664	0.0070	10.1377	0.3689	0.4469	0.0065	2524	70	2447	34	2382	29
19WC01-1-12	19.79	32.02	0.62	0.1671	0.0059	11.0703	0.3705	0.4822	0.0070	2529	59	2529	31	2537	31
19WC01-1-13	19.04	33.13	0.57	0.1650	0.0056	10.5893	0.3536	0.4650	0.0065	2507	57	2488	31	2461	28
19WC01-1-14	1.06	3.63	0.29	0.1743	0.0146	10.2924	0.8161	0.4526	0.0194	2600	140	2461	73	2407	86
19WC01-1-15	32.73	69.99	0.47	0.1636	0.0044	9.9447	0.2581	0.4404	0.0054	2494	45	2430	24	2353	24
19WC01-1-16	15.08	30.28	0.50	0.1570	0.0057	9.7923	0.3505	0.4541	0.0069	2433	62	2415	33	2413	31
19WC01-1-17	21.40	29.49	0.73	0.1579	0.0051	10.0551	0.3088	0.4649	0.0075	2435	55	2440	28	2461	33
19WC01-1-18	26.77	25.50	1.05	0.1574	0.0053	10.2054	0.3321	0.4734	0.0072	2428	57	2454	30	2499	32
19WC01-1-19	65.96	172.46	0.38	0.1575	0.0036	10.3603	0.2754	0.4747	0.0072	2429	44	2468	25	2504	31
19WC01-1-20	16.58	26.47	0.63	0.1481	0.0058	8.3597	0.3164	0.4117	0.0067	2324	67	2271	34	2223	30
19WC01-1-21	316.91	403.67	0.79	0.1626	0.0037	10.3330	0.2328	0.4580	0.0042	2483	39	2465	21	2431	19
19WC01-1-22	20.19	34.67	0.58	0.1507	0.0053	8.9602	0.3027	0.4319	0.0061	2354	59	2334	31	2314	27
19WC01-1-23	1.79	22.56	0.08	0.1845	0.0075	11.5665	0.4248	0.4641	0.0096	2694	67	2570	34	2458	42

Table S1 (contiuned).

spots	Element(ppm)		Th/U	Ratios				Ages (Ma)							
	Th	U		²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ	²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ
Sample 19WC01-1															
19WC01-1-24	2.13	13.06	0.16	0.1802	0.0111	12.2240	0.6400	0.5042	0.0117	2655	102	2622	49	2632	50
19WC01-1-25	10.74	21.03	0.51	0.1534	0.0064	9.7238	0.3636	0.4643	0.0070	2384	66	2409	34	2459	31
19WC01-1-26	18.44	35.67	0.52	0.1581	0.0048	10.0340	0.3118	0.4584	0.0067	2435	52	2438	29	2433	30
19WC01-1-27	18.22	30.45	0.60	0.1539	0.0050	8.8964	0.2806	0.4199	0.0066	2391	50	2327	29	2260	30
19WC01-1-28	25.03	46.19	0.54	0.1564	0.0049	9.8401	0.2976	0.4555	0.0063	2418	52	2420	28	2420	28
19WC01-1-29	31.04	26.58	1.17	0.1455	0.0053	8.4153	0.2987	0.4195	0.0065	2294	63	2277	32	2258	29
19WC01-1-30	8.78	17.84	0.49	0.1394	0.0054	7.9932	0.2940	0.4178	0.0072	2220	68	2230	33	2251	33
19WC01-1-31	8.66	34.58	0.25	0.1711	0.0071	12.0381	0.5267	0.5127	0.0123	2568	69	2607	41	2668	52
19WC01-1-32	15.45	24.77	0.62	0.1694	0.0060	10.2838	0.4044	0.4375	0.0081	2554	59	2461	36	2340	36
19WC01-1-33	0.03	8.95	0.00	0.1809	0.0108	10.9536	0.5858	0.4597	0.0115	2661	99	2519	50	2438	51
19WC01-1-34	26.09	22.28	1.17	0.1750	0.0068	11.3682	0.4432	0.4713	0.0074	2606	65	2554	36	2489	32
19WC01-1-35	11.42	25.78	0.44	0.1692	0.0063	10.5978	0.3999	0.4552	0.0073	2550	62	2489	35	2418	33
19WC01-1-36	20.72	32.04	0.65	0.1731	0.0059	10.5013	0.3511	0.4411	0.0063	2587	57	2480	31	2356	28
19WC01-1-37	116.71	261.98	0.45	0.1776	0.0040	12.1508	0.2720	0.4937	0.0047	2631	69	2616	21	2587	20
19WC01-1-38	13.89	84.93	0.16	0.1769	0.0043	11.2411	0.2873	0.4586	0.0057	2624	41	2543	24	2433	25
19WC01-1-39	18.04	31.31	0.58	0.1650	0.0052	10.7391	0.3264	0.4720	0.0060	2507	53	2501	28	2493	26
19WC01-1-40	21.48	27.87	0.77	0.1646	0.0053	10.2618	0.3231	0.4530	0.0067	2503	59	2459	29	2409	30
19WC01-1-41	18.80	31.82	0.59	0.1615	0.0053	10.0664	0.3249	0.4522	0.0066	2472	55	2441	30	2405	29
19WC01-1-42	24.64	39.12	0.63	0.1575	0.0054	10.0470	0.3388	0.4602	0.0068	2429	58	2439	31	2440	30
19WC01-1-43	98.88	224.33	0.44	0.1635	0.0041	10.7802	0.2739	0.4738	0.0051	2492	75	2504	24	2500	22
19WC01-1-44	59.60	826.97	0.07	0.1677	0.0035	11.1308	0.2309	0.4772	0.0045	2535	35	2534	19	2515	20
19WC01-1-45	19.03	32.44	0.59	0.1598	0.0054	9.9446	0.3306	0.4508	0.0061	2454	57	2430	31	2399	27

Table S1 (contiuned).

spots	Element(ppm)		Th/U	Ratios				Ages (Ma)							
	Th	U		²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ	²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ
Sample 19WC01-1															
19WC01-1-46	13.55	24.09	0.56	0.1673	0.0062	10.3124	0.3689	0.4497	0.0063	2531	63	2463	33	2394	28
19WC01-1-47	14.57	24.31	0.60	0.1691	0.0060	10.8417	0.3917	0.4636	0.0070	2550	60	2510	34	2456	31
19WC01-1-48	17.10	31.29	0.55	0.1662	0.0052	10.6535	0.3804	0.4612	0.0089	2520	53	2493	33	2445	39
19WC01-1-49	8.52	22.98	0.37	0.1830	0.0123	12.1969	0.7302	0.5068	0.0184	2681	111	2620	56	2643	79
19WC01-1-50	19.35	34.29	0.56	0.1689	0.0060	10.7032	0.3919	0.4592	0.0082	2547	59	2498	34	2436	36
19WC01-1-51	78.05	207.19	0.38	0.1623	0.0037	10.6512	0.2542	0.4722	0.0049	2479	39	2493	22	2493	21
19WC01-1-53	15.03	29.26	0.51	0.1772	0.0061	12.1645	0.4372	0.4979	0.0085	2627	57	2617	34	2605	36
19WC01-1-55	18.59	30.57	0.61	0.1715	0.0052	11.0383	0.3435	0.4661	0.0075	2573	56	2526	29	2467	33
19WC01-1-57	19.21	24.15	0.80	0.1679	0.0069	10.5497	0.3822	0.4651	0.0085	2537	70	2484	34	2462	37
19WC01-1-58	26.06	49.25	0.53	0.1589	0.0042	10.1035	0.2708	0.4578	0.0052	2444	45	2444	25	2430	23
19WC01-1-59	34.74	26.25	1.32	0.1707	0.0060	10.7028	0.3524	0.4573	0.0075	2565	59	2498	31	2428	33
19WC01-1-60	17.33	28.34	0.61	0.1772	0.0053	11.9372	0.3487	0.4892	0.0067	2627	50	2599	27	2567	29
19WC01-1-62	60.50	176.70	0.34	0.1715	0.0037	10.9022	0.2390	0.4588	0.0051	2572	36	2515	20	2434	23
19WC01-1-63	31.16	73.01	0.43	0.1724	0.0045	10.9174	0.3008	0.4567	0.0062	2581	44	2516	26	2425	27
19WC01-1-64	31.66	20.48	1.55	0.1639	0.0079	9.9445	0.4422	0.4432	0.0085	2496	82	2430	41	2365	38
19WC01-1-65	21.05	34.67	0.61	0.1606	0.0063	10.0138	0.3665	0.4507	0.0074	2461	67	2436	34	2398	33
19WC01-1-66	23.27	27.86	0.84	0.1587	0.0064	9.3155	0.3715	0.4242	0.0070	2442	68	2370	37	2279	32
19WC01-1-67	88.76	148.63	0.60	0.1616	0.0043	9.9631	0.2522	0.4447	0.0053	2473	45	2431	23	2372	24
19WC01-1-68	19.42	20.09	0.97	0.1680	0.0061	10.5519	0.4002	0.4574	0.0102	2539	61	2484	35	2428	45
19WC01-1-69	20.63	47.32	0.44	0.1512	0.0052	8.8764	0.2886	0.4273	0.0059	2361	59	2325	30	2294	27
19WC01-1-70	31.05	64.50	0.48	0.1546	0.0048	9.5281	0.2885	0.4476	0.0058	2397	53	2390	28	2384	26
19WC01-1-71	11.20	20.26	0.55	0.1579	0.0068	9.7744	0.4019	0.4522	0.0073	2435	73	2414	38	2405	32

Table S1 (contiuned).

spots	Element(ppm)		Th/U	Ratios		Ages (Ma)									
	Th	U		²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ	²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ
Sample 19WC01-1															
19WC01-1-72	22.04	24.90	0.88	0.1644	0.0061	10.5575	0.3737	0.4697	0.0070	2501	62	2485	33	2482	31
19WC01-1-73	127.02	233.35	0.54	0.1806	0.0045	12.4677	0.3182	0.4986	0.0052	2658	41	2640	24	2608	23
19WC01-1-74	26.02	25.97	1.00	0.1661	0.0060	10.4183	0.3713	0.4572	0.0063	2520	66	2473	33	2427	28
19WC01-1-75	18.76	30.57	0.61	0.1508	0.0050	9.0029	0.2893	0.4355	0.0064	2355	56	2338	29	2331	29
19WC01-1-76	15.72	19.85	0.79	0.1658	0.0067	10.4976	0.4124	0.4651	0.0081	2517	69	2480	36	2462	36
19WC01-1-77	24.43	24.16	1.01	0.1627	0.0060	10.0488	0.3759	0.4511	0.0077	2484	63	2439	35	2400	34
19WC01-1-78	19.22	41.94	0.46	0.1577	0.0052	8.8900	0.2872	0.4114	0.0059	2431	56	2327	30	2222	27
19WC01-1-79	21.99	36.00	0.61	0.1741	0.0051	10.7681	0.3165	0.4492	0.0062	2598	49	2503	27	2391	27
19WC01-1-80	21.21	23.90	0.89	0.1612	0.0068	10.1155	0.4154	0.4614	0.0077	2468	72	2445	38	2446	34
19WC01-1-81	28.26	81.96	0.34	0.1752	0.0046	11.3654	0.3046	0.4705	0.0054	2609	44	2554	25	2486	24
19WC01-1-82	20.58	20.83	0.99	0.1687	0.0063	10.5056	0.3857	0.4539	0.0062	2546	63	2480	34	2413	27
Sample 19WC08-1															
19WC08-1-01	8.65	8.53	1.01	0.1731	0.0098	9.7569	0.5027	0.4226	0.0109	2588	90	2412	47	2272	50
19WC08-1-02	105.22	217.63	0.48	0.1647	0.0045	10.1518	0.2826	0.4466	0.0053	2506	45	2449	26	2380	24
19WC08-1-03	129.61	234.19	0.55	0.1692	0.0043	11.0543	0.2885	0.4738	0.0057	2550	43	2528	24	2500	25
19WC08-1-04	41.24	63.68	0.65	0.1646	0.0048	10.4354	0.3175	0.4582	0.0056	2506	50	2474	28	2432	25
19WC08-1-05	37.87	48.04	0.79	0.1703	0.0048	10.8472	0.3216	0.4609	0.0064	2560	47	2510	28	2444	28
19WC08-1-06	46.36	95.06	0.49	0.1545	0.0039	9.6429	0.2582	0.4508	0.0062	2398	43	2401	25	2399	28
19WC08-1-07	48.76	33.75	1.44	0.1753	0.0053	12.0527	0.3619	0.4984	0.0070	2609	51	2609	28	2607	30
19WC08-1-09	46.98	59.57	0.79	0.1699	0.0046	11.9638	0.3269	0.5075	0.0066	2557	46	2602	26	2646	28
19WC08-1-10	58.90	185.43	0.32	0.1599	0.0039	9.7050	0.2433	0.4358	0.0049	2455	41	2407	23	2332	22
19WC08-1-11	46.85	38.95	1.20	0.1513	0.0050	9.0294	0.2862	0.4333	0.0059	2361	57	2341	29	2320	26

Table S1 (contiuned).

spots	Element(ppm)		Th/U	Ratios				Ages (Ma)							
	Th	U		²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ	²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ
Sample 19WC08-1															
19WC08-1-12	57.88	172.94	0.33	0.1630	0.0036	10.3153	0.2275	0.4555	0.0049	2487	37	2463	20	2420	22
19WC08-1-13	39.39	156.39	0.25	0.1657	0.0038	10.3261	0.2293	0.4489	0.0044	2515	39	2464	21	2390	20
19WC08-1-14	44.70	120.41	0.37	0.1648	0.0039	10.5351	0.2451	0.4609	0.0047	2505	41	2483	22	2443	21
19WC08-1-16	88.54	199.19	0.44	0.1680	0.0044	10.9846	0.2883	0.4713	0.0056	2539	43	2522	24	2489	25
19WC08-1-17	23.50	15.29	1.54	0.1791	0.0080	11.2951	0.4569	0.4671	0.0096	2656	74	2548	38	2471	42
19WC08-1-18	74.02	179.07	0.41	0.1558	0.0037	10.0081	0.2341	0.4651	0.0064	2410	40	2436	22	2462	28
19WC08-1-19	26.82	16.34	1.64	0.1583	0.0065	9.9328	0.4060	0.4570	0.0085	2439	70	2429	38	2426	37
19WC08-1-20	46.62	30.58	1.52	0.1512	0.0051	9.2026	0.3038	0.4421	0.0062	2359	57	2358	30	2360	28
19WC08-1-21	36.28	98.90	0.37	0.1620	0.0041	10.1799	0.2539	0.4538	0.0053	2477	43	2451	23	2412	24
19WC08-1-22	92.68	101.57	0.91	0.1633	0.0042	10.6406	0.2696	0.4704	0.0052	2490	77	2492	24	2485	23
19WC08-1-23	48.49	36.32	1.34	0.1628	0.0055	10.2807	0.3411	0.4587	0.0070	2487	57	2460	31	2434	31
19WC08-1-24	84.96	196.91	0.43	0.1602	0.0042	10.3056	0.2698	0.4642	0.0053	2457	44	2463	24	2458	23
19WC08-1-25	42.50	46.02	0.92	0.1520	0.0049	8.9363	0.2827	0.4256	0.0060	2368	55	2332	29	2286	27
19WC08-1-26	48.18	27.65	1.74	0.1693	0.0054	11.5698	0.3625	0.4959	0.0077	2551	53	2570	29	2596	33
19WC08-1-27	59.71	112.02	0.53	0.1572	0.0039	9.7179	0.2393	0.4465	0.0053	2426	48	2408	23	2380	24
19WC08-1-28	42.37	221.50	0.19	0.1594	0.0033	9.8279	0.2213	0.4434	0.0052	2450	35	2419	21	2366	23
19WC08-1-29	46.37	43.31	1.07	0.1544	0.0045	9.9857	0.2894	0.4679	0.0061	2395	49	2433	27	2474	27
19WC08-1-30	66.83	272.00	0.25	0.1652	0.0035	10.3141	0.2289	0.4493	0.0050	2510	36	2463	21	2392	22
19WC08-1-32	96.80	249.46	0.39	0.1652	0.0040	10.4851	0.2626	0.4565	0.0049	2510	41	2479	23	2424	22
19WC08-1-33	46.31	275.73	0.17	0.1659	0.0042	9.8041	0.2486	0.4253	0.0045	2516	43	2417	23	2285	20
19WC08-1-34	40.85	79.93	0.51	0.1690	0.0049	10.9046	0.3172	0.4656	0.0062	2548	48	2515	27	2464	27
19WC08-1-35	44.49	23.95	1.86	0.1730	0.0056	11.0859	0.3589	0.4641	0.0076	2587	54	2530	30	2458	34

Table S1 (contiuned).

spots	Element(ppm)		Th/U	Ratios				Ages (Ma)							
	Th	U		²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ	²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ
Sample 19WC08-1															
19WC08-1-36	1.24	17.85	0.07	0.1785	0.0078	11.5261	0.4671	0.4724	0.0085	2639	72	2567	38	2494	37
19WC08-1-37	43.80	303.73	0.14	0.1675	0.0040	10.1515	0.2707	0.4351	0.0066	2532	40	2449	25	2329	30
19WC08-1-38	47.74	27.30	1.75	0.1711	0.0061	11.0916	0.3859	0.4675	0.0068	2568	60	2531	32	2473	30
19WC08-1-39	76.09	139.46	0.55	0.1657	0.0047	10.0935	0.2700	0.4365	0.0044	2517	42	2443	25	2335	20
19WC08-1-40	78.48	169.25	0.46	0.1677	0.0046	10.9946	0.2866	0.4702	0.0056	2535	46	2523	24	2484	25
19WC08-1-41	63.05	246.86	0.26	0.1658	0.0048	10.1242	0.2669	0.4385	0.0052	2516	49	2446	24	2344	23
19WC08-1-42	50.78	124.72	0.41	0.1618	0.0051	10.3011	0.2978	0.4564	0.0054	2476	53	2462	27	2423	24
19WC08-1-43	63.88	131.16	0.49	0.1638	0.0054	10.3475	0.3193	0.4526	0.0060	2495	55	2466	29	2407	27
19WC08-1-44	44.84	35.88	1.25	0.1606	0.0068	9.8078	0.3896	0.4397	0.0075	2462	72	2417	37	2349	33
19WC08-1-45	39.37	687.54	0.06	0.1559	0.0037	9.2363	0.2213	0.4262	0.0044	2413	40	2362	22	2289	20
19WC08-1-46	157.71	243.95	0.65	0.1693	0.0038	11.6109	0.2804	0.4930	0.0063	2551	38	2574	23	2584	27
19WC08-1-47	45.59	30.40	1.50	0.1614	0.0053	10.1193	0.3283	0.4539	0.0068	2472	56	2446	30	2413	30
19WC08-1-48	78.49	301.74	0.26	0.1617	0.0033	9.6374	0.1959	0.4277	0.0036	2474	35	2401	19	2295	16
19WC08-1-49	59.42	332.96	0.18	0.1485	0.0057	11.3649	0.2763	0.4650	0.0064	2329	66	2554	23	2462	28
19WC08-1-50	22.98	74.36	0.31	0.1641	0.0045	10.4816	0.2802	0.4597	0.0057	2499	46	2478	25	2438	25
19WC08-1-51	48.17	46.14	1.04	0.1611	0.0058	10.1030	0.3666	0.4507	0.0064	2478	61	2444	34	2398	28
19WC08-1-52	24.60	15.93	1.54	0.1385	0.0071	8.2165	0.4378	0.4270	0.0084	2209	89	2255	48	2292	38
19WC08-1-53	47.51	82.01	0.58	0.1634	0.0044	10.5115	0.2756	0.4617	0.0048	2492	40	2481	24	2447	21
19WC08-1-54	129.40	302.80	0.43	0.1543	0.0035	9.1325	0.1991	0.4249	0.0038	2394	39	2351	20	2282	17
19WC08-1-55	26.57	16.46	1.61	0.1533	0.0069	9.1958	0.4145	0.4360	0.0078	2383	77	2358	41	2333	35
19WC08-1-56	28.38	17.90	1.59	0.1610	0.0079	9.7518	0.4418	0.4453	0.0080	2466	83	2412	42	2375	36
19WC08-1-58	68.74	94.96	0.72	0.1518	0.0045	9.8249	0.2901	0.4648	0.0058	2366	51	2418	27	2461	25

Table S1 (contiuned).

spots	Element(ppm)		Th/U	Ratios		Ages (Ma)									
	Th	U		²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ	²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ
Sample 19WC08-1															
19WC08-1-59	46.29	117.72	0.39	0.1560	0.0044	9.8800	0.2716	0.4558	0.0055	2412	48	2424	25	2421	24
19WC08-1-60	44.38	43.61	1.02	0.1466	0.0047	8.6065	0.2712	0.4227	0.0059	2306	55	2297	29	2273	27
19WC08-1-61	73.20	148.30	0.49	0.1537	0.0037	9.0919	0.2064	0.4254	0.0041	2387	41	2347	21	2285	18
19WC08-1-62	129.79	198.63	0.65	0.1576	0.0036	9.1537	0.1991	0.4178	0.0042	2431	39	2353	20	2251	19
19WC08-1-63	46.26	37.09	1.25	0.1621	0.0052	10.3828	0.3153	0.4629	0.0060	2477	49	2470	28	2452	26
19WC08-1-64	106.91	223.34	0.48	0.1628	0.0040	11.0653	0.2741	0.4872	0.0050	2484	42	2529	23	2558	22
19WC08-1-65	30.57	63.87	0.48	0.1601	0.0049	10.3589	0.3097	0.4658	0.0057	2457	51	2467	28	2465	25
19WC08-1-66	52.21	57.79	0.90	0.1592	0.0048	10.2889	0.3042	0.4645	0.0057	2448	52	2461	27	2459	25
19WC08-1-67	90.71	95.99	0.95	0.1645	0.0044	10.4908	0.2768	0.4582	0.0052	2502	45	2479	25	2432	23
19WC08-1-68	60.72	78.62	0.77	0.1551	0.0043	9.6092	0.2812	0.4442	0.0060	2403	47	2398	27	2369	27
19WC08-1-69	80.39	413.30	0.19	0.1612	0.0036	10.2774	0.2188	0.4574	0.0041	2468	37	2460	20	2428	18
19WC08-1-71	114.48	121.84	0.94	0.1702	0.0052	9.7207	0.2952	0.4100	0.0049	2561	52	2409	28	2215	22
19WC08-1-72	42.45	35.28	1.20	0.1620	0.0061	10.4111	0.3812	0.4639	0.0073	2477	63	2472	34	2457	32
19WC08-1-73	54.12	55.50	0.98	0.1697	0.0062	10.8268	0.3862	0.4601	0.0060	2554	62	2508	33	2440	26
19WC08-1-74	51.75	179.01	0.29	0.1612	0.0045	9.8049	0.2639	0.4379	0.0047	2468	47	2417	25	2341	21
19WC08-1-75	94.83	218.07	0.43	0.1670	0.0040	10.6421	0.2585	0.4586	0.0049	2527	40	2492	23	2433	22
19WC08-1-76	55.38	29.04	1.91	0.1664	0.0061	10.5368	0.3770	0.4603	0.0069	2524	61	2483	33	2441	31
19WC08-1-77	35.61	359.08	0.10	0.1609	0.0036	10.2211	0.2594	0.4569	0.0057	2465	37	2455	24	2426	25
19WC08-1-78	101.99	234.83	0.43	0.1590	0.0038	10.2702	0.2613	0.4658	0.0052	2456	40	2459	24	2465	23
19WC08-1-79	16.31	12.05	1.35	0.1695	0.0080	10.8438	0.5251	0.4688	0.0107	2554	79	2510	45	2478	47
19WC08-1-80	59.19	158.00	0.37	0.1588	0.0040	9.7788	0.2591	0.4458	0.0055	2443	44	2414	24	2377	24
19WC08-1-81	23.69	62.69	0.38	0.1547	0.0047	9.2025	0.2716	0.4326	0.0052	2398	52	2358	27	2317	24

Table S1 (contiuned).

spots	Element(ppm)		Th/U	Ratios		Ages (Ma)									
	Th	U		²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ	²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ
Sample 19WC08-1															
19WC08-1-82	50.63	91.92	0.55	0.1631	0.0040	10.4971	0.2535	0.4659	0.0048	2488	41	2480	22	2466	21
19WC08-1-83	72.00	220.73	0.33	0.1573	0.0035	9.4859	0.2020	0.4362	0.0040	2427	37	2386	20	2333	18
19WC08-1-84	37.13	21.18	1.75	0.1593	0.0063	9.8197	0.3781	0.4513	0.0078	2450	67	2418	36	2401	35
19WC08-1-85	81.67	177.23	0.46	0.1673	0.0041	10.7624	0.2591	0.4643	0.0042	2531	42	2503	22	2458	19
19WC08-1-86	40.80	53.24	0.77	0.1395	0.0049	8.3443	0.2805	0.4363	0.0065	2221	61	2269	31	2334	29
19WC08-1-88	63.51	63.07	1.01	0.1718	0.0049	11.3286	0.3126	0.4778	0.0060	2576	48	2551	26	2517	26
19WC08-1-89	38.79	50.22	0.77	0.1757	0.0052	11.3446	0.3333	0.4674	0.0057	2613	50	2552	27	2472	25
19WC08-1-90	57.90	189.87	0.30	0.1658	0.0037	9.8232	0.2225	0.4265	0.0040	2516	37	2418	21	2290	18
19WC08-1-91	110.83	89.73	1.24	0.1744	0.0045	11.2196	0.2892	0.4647	0.0055	2611	43	2542	24	2460	24
Sample 19WC16-1															
19WC16-1-01	192.89	546.35	0.35	0.1690	0.0032	11.5931	0.2227	0.4939	0.0041	2548	31	2572	18	2588	18
19WC16-1-02	49.18	144.90	0.34	0.1653	0.0036	10.9035	0.2324	0.4758	0.0042	2510	37	2515	20	2509	19
19WC16-1-03	256.15	420.62	0.61	0.1697	0.0034	11.3508	0.2382	0.4813	0.0043	2555	34	2552	20	2533	19
19WC16-1-05	196.04	582.83	0.34	0.1681	0.0036	11.5948	0.2561	0.4961	0.0045	2539	37	2572	21	2597	20
19WC16-1-06	114.75	282.46	0.41	0.1704	0.0039	12.0274	0.2823	0.5080	0.0054	2561	38	2607	22	2648	23
19WC16-1-07	127.41	286.43	0.44	0.1703	0.0042	11.7130	0.2929	0.4946	0.0052	2560	45	2582	23	2591	23
19WC16-1-08	62.43	340.02	0.18	0.1720	0.0039	11.9951	0.2709	0.5018	0.0046	2577	39	2604	21	2622	20
19WC16-1-09	56.31	191.47	0.29	0.1702	0.0037	11.7657	0.2561	0.4982	0.0050	2559	36	2586	20	2606	22
19WC16-1-10	48.78	291.52	0.17	0.1711	0.0035	11.9257	0.2428	0.5022	0.0048	2569	34	2599	19	2623	21
19WC16-1-11	63.63	118.33	0.54	0.1717	0.0036	11.5547	0.2489	0.4847	0.0049	2576	35	2569	20	2548	21
19WC16-1-13	84.29	394.80	0.21	0.1764	0.0038	11.8925	0.2612	0.4858	0.0051	2620	36	2596	21	2552	22
19WC16-1-14	78.44	72.49	1.08	0.1704	0.0050	10.4078	0.3072	0.4406	0.0054	2561	43	2472	27	2353	24

Table S1 (contiuned).

spots	Element(ppm)		Th/U	Ratios				Ages (Ma)								
	Th	U		Th/U	²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ	²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ
Sample 19WC16-1																
19WC16-1-15	88.58	121.21	0.73	0.1727	0.0045	11.1385	0.2937	0.4646	0.0052	2584	44	2535	25	2460	23	
19WC16-1-16	41.76	979.52	0.04	0.1685	0.0036	10.7813	0.2338	0.4600	0.0041	2543	41	2504	20	2439	18	
19WC16-1-17	82.89	82.84	1.00	0.1713	0.0043	11.1045	0.2818	0.4673	0.0055	2572	42	2532	24	2472	24	
19WC16-1-18	31.33	985.24	0.03	0.1726	0.0035	11.1937	0.2613	0.4650	0.0058	2583	33	2539	22	2462	25	
19WC16-1-19	80.17	66.77	1.20	0.1694	0.0050	10.7720	0.3051	0.4588	0.0053	2554	54	2504	26	2434	24	
19WC16-1-20	126.37	422.92	0.30	0.1734	0.0041	11.3242	0.2697	0.4686	0.0048	2591	40	2550	22	2478	21	
19WC16-1-21	76.84	63.93	1.20	0.1787	0.0055	11.1017	0.3352	0.4473	0.0062	2643	50	2532	28	2383	27	
19WC16-1-22	39.10	368.94	0.11	0.1767	0.0045	11.8686	0.3327	0.4821	0.0073	2622	43	2594	26	2536	32	
19WC16-1-23	87.20	68.23	1.28	0.1698	0.0045	10.1401	0.2643	0.4306	0.0045	2567	50	2448	24	2308	20	
19WC16-1-24	195.84	277.71	0.71	0.1665	0.0036	10.8968	0.2314	0.4720	0.0044	2524	36	2514	20	2492	19	
19WC16-1-25	292.55	403.93	0.72	0.1695	0.0034	11.4210	0.2428	0.4852	0.0050	2553	33	2558	20	2550	22	
19WC16-1-26	23.34	981.08	0.02	0.1636	0.0033	10.3871	0.2125	0.4581	0.0042	2494	34	2470	19	2431	19	
19WC16-1-27	47.61	135.31	0.35	0.1623	0.0039	9.8981	0.2409	0.4410	0.0044	2479	41	2425	23	2355	20	
19WC16-1-28	57.18	716.91	0.08	0.1689	0.0038	11.2015	0.2658	0.4788	0.0047	2547	38	2540	22	2522	20	
19WC16-1-29	78.02	64.41	1.21	0.1692	0.0047	11.2083	0.3101	0.4807	0.0059	2550	46	2541	26	2530	26	
19WC16-1-30	100.75	203.44	0.50	0.1677	0.0035	10.6912	0.2337	0.4608	0.0045	2534	35	2497	20	2443	20	
19WC16-1-31	63.22	103.40	0.61	0.1651	0.0039	10.3318	0.2419	0.4529	0.0043	2509	41	2465	22	2408	19	
19WC16-1-32	150.74	211.07	0.71	0.1679	0.0033	11.2323	0.2357	0.4831	0.0049	2537	33	2543	20	2541	21	
19WC16-1-33	62.14	117.20	0.53	0.1639	0.0037	11.5028	0.3032	0.5055	0.0072	2498	71	2565	25	2637	31	
19WC16-1-34	158.76	341.90	0.46	0.1587	0.0034	10.7475	0.2368	0.4883	0.0048	2443	36	2502	21	2564	21	
19WC16-1-36	103.75	676.33	0.15	0.1645	0.0035	11.1294	0.2417	0.4872	0.0045	2502	37	2534	20	2559	19	
19WC16-1-37	54.73	141.55	0.39	0.1669	0.0038	11.3600	0.2724	0.4909	0.0060	2528	38	2553	22	2575	26	

Table S1 (contiuned).

spots	Element(ppm)		Th/U	Ratios		Ages (Ma)									
	Th	U		²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ	²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ
Sample 19WC16-1															
19WC16-1-38	75.60	210.98	0.36	0.1678	0.0036	11.2639	0.2447	0.4837	0.0046	2536	36	2545	20	2543	20
19WC16-1-39	72.19	577.29	0.13	0.1661	0.0033	12.0170	0.2552	0.5210	0.0058	2520	34	2606	20	2703	24
19WC16-1-40	699.41	1575.20	0.44	0.1745	0.0036	12.3070	0.2592	0.5075	0.0044	2602	35	2628	20	2646	19
19WC16-1-41	69.42	79.46	0.87	0.1629	0.0045	10.6068	0.2801	0.4708	0.0055	2487	46	2489	25	2487	24
19WC16-1-42	50.13	137.63	0.36	0.1680	0.0046	11.1367	0.2997	0.4781	0.0053	2539	46	2535	25	2519	23
19WC16-1-43	57.41	1198.23	0.05	0.1696	0.0044	10.8536	0.2900	0.4605	0.0056	2553	43	2511	25	2442	25
19WC16-1-44	66.31	101.75	0.65	0.1747	0.0046	10.8246	0.2857	0.4457	0.0045	2603	44	2508	25	2376	20
19WC16-1-45	52.94	324.95	0.16	0.1746	0.0040	11.4261	0.2678	0.4706	0.0049	2602	38	2559	22	2486	22
19WC16-1-46	80.13	135.46	0.59	0.1742	0.0041	11.5695	0.2782	0.4779	0.0053	2598	39	2570	23	2518	23
19WC16-1-48	11.42	416.44	0.03	0.1642	0.0034	10.0047	0.2162	0.4375	0.0044	2499	68	2435	20	2339	20
Sample 19WC37-2															
19WC37-2-01	49.55	96.65	0.51	0.1646	0.0039	10.8817	0.2572	0.4774	0.0055	2503	40	2513	22	2516	24
19WC37-2-02	22.35	38.90	0.57	0.1757	0.0062	11.9178	0.4431	0.4907	0.0080	2613	58	2598	35	2574	35
19WC37-2-03	36.61	41.72	0.88	0.1652	0.0053	11.2290	0.3640	0.4910	0.0071	2510	55	2542	30	2575	31
19WC37-2-04	159.53	182.27	0.88	0.1656	0.0040	10.5882	0.2535	0.4600	0.0047	2514	41	2488	22	2440	21
19WC37-2-05	23.63	52.29	0.45	0.1758	0.0046	12.3002	0.3149	0.5049	0.0061	2614	44	2628	24	2635	26
19WC37-2-06	54.45	106.59	0.51	0.1724	0.0039	11.7379	0.2585	0.4905	0.0052	2583	38	2584	21	2573	22
19WC37-2-07	125.76	146.76	0.86	0.1699	0.0035	11.3125	0.2331	0.4790	0.0046	2557	35	2549	19	2523	20
19WC37-2-08	24.67	71.33	0.35	0.1713	0.0039	11.9713	0.2972	0.5036	0.0078	2572	39	2602	23	2629	34
19WC37-2-09	12.25	24.64	0.50	0.1818	0.0053	11.9351	0.3482	0.4743	0.0071	2669	48	2599	27	2503	31
19WC37-2-10	40.81	67.87	0.60	0.1837	0.0049	12.6519	0.3600	0.4951	0.0072	2687	45	2654	27	2593	31
19WC37-2-11	41.80	76.16	0.55	0.1803	0.0048	12.4473	0.3354	0.4962	0.0059	2655	44	2639	25	2597	25

Table S1 (contiuned).

spots	Element(ppm)		Th/U	Ratios		Ages (Ma)									
	Th	U		²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ	²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ
Sample 19WC37-2															
19WC37-2-12	65.41	114.11	0.57	0.1650	0.0037	11.0856	0.2542	0.4838	0.0057	2509	38	2530	21	2544	25
19WC37-2-13	58.33	107.11	0.54	0.1698	0.0038	11.3065	0.2595	0.4799	0.0053	2567	38	2549	21	2527	23
19WC37-2-14	52.74	94.12	0.56	0.1680	0.0037	11.1548	0.2501	0.4792	0.0048	2539	38	2536	21	2524	21
19WC37-2-15	56.52	72.39	0.78	0.1689	0.0039	11.5984	0.2659	0.4976	0.0055	2547	39	2573	21	2603	24
19WC37-2-16	16.72	33.34	0.50	0.1744	0.0056	11.3479	0.3624	0.4744	0.0066	2611	53	2552	30	2503	29
19WC37-2-17	72.00	103.50	0.70	0.1693	0.0043	11.1165	0.2901	0.4749	0.0051	2551	42	2533	24	2505	22
19WC37-2-18	24.52	54.41	0.45	0.1616	0.0046	10.8444	0.3251	0.4864	0.0065	2473	48	2510	28	2555	28
19WC37-2-19	30.53	49.65	0.61	0.1714	0.0051	11.6030	0.3586	0.4913	0.0067	2572	50	2573	29	2577	29
19WC37-2-20	48.81	83.39	0.59	0.1744	0.0045	12.2911	0.3345	0.5108	0.0066	2611	43	2627	26	2660	28
19WC37-2-21	83.64	115.90	0.72	0.1646	0.0038	11.1461	0.2634	0.4906	0.0055	2506	38	2535	22	2573	24
19WC37-2-22	87.30	119.35	0.73	0.1694	0.0036	11.6471	0.2581	0.4977	0.0053	2554	35	2576	21	2604	23
19WC37-2-23	26.99	52.27	0.52	0.1689	0.0044	11.4442	0.2939	0.4919	0.0055	2547	44	2560	24	2579	24
19WC37-2-24	70.24	117.54	0.60	0.1636	0.0034	10.6895	0.2323	0.4724	0.0045	2494	35	2497	20	2494	20
19WC37-2-25	78.38	130.00	0.60	0.1669	0.0036	11.2571	0.2452	0.4880	0.0048	2528	31	2545	20	2562	21
19WC37-2-26	65.99	102.27	0.65	0.1717	0.0039	11.8279	0.2782	0.4985	0.0057	2576	38	2591	22	2607	24
19WC37-2-27	29.93	59.04	0.51	0.1573	0.0040	9.8404	0.2596	0.4528	0.0056	2428	43	2420	24	2408	25
19WC37-2-28	21.47	32.51	0.66	0.1572	0.0049	10.0323	0.2901	0.4657	0.0059	2428	54	2438	27	2464	26
19WC37-2-29	48.86	85.25	0.57	0.1738	0.0042	12.1431	0.2999	0.5054	0.0060	2595	40	2616	23	2637	26
19WC37-2-30	15.77	32.11	0.49	0.1593	0.0054	10.7468	0.3646	0.4895	0.0064	2448	57	2501	32	2569	28
19WC37-2-31	88.86	106.75	0.83	0.1701	0.0043	11.7326	0.3088	0.4982	0.0056	2558	47	2583	25	2606	24
19WC37-2-32	23.64	39.54	0.60	0.1624	0.0049	10.8618	0.3243	0.4850	0.0064	2481	51	2511	28	2549	28
19WC37-2-33	14.12	29.34	0.48	0.1561	0.0051	9.8689	0.3287	0.4580	0.0062	2415	56	2423	31	2431	28

Table S1 (continued).

spots	Element(ppm)		Th/U	Ratios		Ages (Ma)									
	Th	U		²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ	²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ
Sample 19WC37-2															
19WC37-2-34	87.26	105.22	0.83	0.1687	0.0035	11.5517	0.2519	0.4936	0.0051	2546	35	2569	20	2586	22
19WC37-2-35	23.81	40.37	0.59	0.1682	0.0047	11.4227	0.3015	0.4938	0.0066	2540	47	2558	25	2587	28
19WC37-2-36	20.57	39.14	0.53	0.1703	0.0048	11.6540	0.3246	0.4954	0.0070	2561	47	2577	26	2594	30
19WC37-2-37	13.39	28.44	0.47	0.1743	0.0057	11.9261	0.4152	0.4938	0.0073	2599	55	2599	33	2587	32
19WC37-2-38	50.49	82.82	0.61	0.1693	0.0045	11.4355	0.2876	0.4884	0.0061	2551	44	2559	24	2564	26
19WC37-2-39	46.64	88.11	0.53	0.1562	0.0036	10.3706	0.2384	0.4783	0.0055	2417	39	2468	21	2520	24
19WC37-2-40	34.89	61.75	0.56	0.1674	0.0043	11.5391	0.2969	0.4975	0.0066	2532	44	2568	24	2603	28
19WC37-2-41	28.98	63.50	0.46	0.1669	0.0041	11.4587	0.2916	0.4941	0.0062	2528	42	2561	24	2589	27
19WC37-2-42	22.03	24.62	0.90	0.1553	0.0049	9.4393	0.2825	0.4431	0.0072	2406	54	2382	28	2364	32
19WC37-2-43	17.43	34.52	0.50	0.1689	0.0047	11.5011	0.3185	0.4920	0.0068	2547	46	2565	26	2579	29
19WC37-2-44	58.77	105.53	0.56	0.1738	0.0041	11.7232	0.2699	0.4861	0.0049	2594	39	2583	22	2554	21
19WC37-2-45	63.78	105.19	0.61	0.1691	0.0041	11.3985	0.2683	0.4859	0.0051	2549	41	2556	22	2553	22
19WC37-2-46	101.87	225.04	0.45	0.1626	0.0047	10.5842	0.3019	0.4676	0.0052	2483	49	2487	27	2473	23
19WC37-2-47	66.50	124.48	0.53	0.1724	0.0047	11.6835	0.3172	0.4878	0.0059	2581	45	2579	25	2561	25
19WC37-2-48	48.78	102.93	0.47	0.1670	0.0044	11.2331	0.2889	0.4844	0.0050	2528	44	2543	24	2546	22
19WC37-2-49	15.49	25.17	0.62	0.1748	0.0056	11.8537	0.3792	0.4926	0.0084	2606	53	2593	30	2582	36
19WC37-2-50	11.60	25.07	0.46	0.1749	0.0058	11.9040	0.3875	0.4937	0.0075	2605	56	2597	31	2586	32
19WC37-2-51	61.41	116.52	0.53	0.1736	0.0040	11.9156	0.2774	0.4951	0.0053	2594	39	2598	22	2593	23
19WC37-2-52	93.68	107.97	0.87	0.1671	0.0042	11.5240	0.2852	0.4987	0.0057	2529	43	2567	23	2608	25
19WC37-2-53	19.18	33.96	0.56	0.1710	0.0052	11.4126	0.3508	0.4840	0.0066	2568	51	2557	29	2545	29
19WC37-2-54	54.44	87.26	0.62	0.1725	0.0039	11.8869	0.2760	0.4981	0.0052	2583	38	2596	22	2606	23
19WC37-2-55	29.58	41.84	0.71	0.1609	0.0046	10.4579	0.2777	0.4735	0.0060	2465	53	2476	25	2499	26

Table S1 (contiuned).

spots	Element(ppm)		Th/U	Ratios		Ages (Ma)									
	Th	U		²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ	²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ
Sample 19WC37-2															
19WC37-2-56	66.41	120.35	0.55	0.1550	0.0034	10.1673	0.2295	0.4752	0.0053	2402	37	2450	21	2506	23
19WC37-2-57	16.58	29.13	0.57	0.1589	0.0052	10.1135	0.3356	0.4616	0.0058	2444	56	2445	31	2447	25
19WC37-2-58	109.48	135.30	0.81	0.1642	0.0034	10.6331	0.2311	0.4688	0.0047	2500	35	2492	20	2478	21
19WC37-2-59	34.79	58.75	0.59	0.1648	0.0046	11.3527	0.3178	0.5018	0.0064	2505	47	2553	26	2621	27
19WC37-2-60	40.51	64.44	0.63	0.1660	0.0043	10.9237	0.2997	0.4766	0.0059	2518	44	2517	26	2512	26
19WC37-2-61	19.24	35.28	0.55	0.1624	0.0048	10.7813	0.3276	0.4830	0.0070	2481	50	2504	28	2540	30
19WC37-2-62	55.39	100.49	0.55	0.1580	0.0033	10.4727	0.2167	0.4807	0.0049	2434	35	2478	19	2530	22
19WC37-2-63	43.43	71.71	0.61	0.1717	0.0038	11.6363	0.2570	0.4911	0.0051	2574	37	2576	21	2576	22
19WC37-2-64	28.78	54.01	0.53	0.1827	0.0045	13.0919	0.3372	0.5185	0.0065	2677	41	2686	24	2693	28
19WC37-2-65	120.06	154.82	0.78	0.1615	0.0033	10.8145	0.2288	0.4836	0.0047	2472	35	2507	20	2543	20
19WC37-2-66	15.66	713.43	0.02	0.1654	0.0035	10.9947	0.2427	0.4796	0.0048	2522	36	2523	21	2525	21
19WC37-2-67	28.50	75.08	0.38	0.1585	0.0043	10.5514	0.2717	0.4833	0.0058	2440	46	2484	24	2542	25
19WC37-2-68	29.93	54.17	0.55	0.1619	0.0044	10.5142	0.2796	0.4701	0.0056	2475	46	2481	25	2484	25
19WC37-2-69	45.42	76.00	0.60	0.1734	0.0043	12.0546	0.2897	0.5021	0.0050	2591	41	2609	23	2623	22
19WC37-2-70	51.45	87.36	0.59	0.1679	0.0039	11.5104	0.2625	0.4954	0.0054	2536	39	2565	21	2594	23
19WC37-2-71	34.96	71.31	0.49	0.1681	0.0039	11.5740	0.2694	0.4960	0.0052	2539	39	2571	22	2597	22
19WC37-2-72	39.96	147.97	0.27	0.1589	0.0035	10.5860	0.2293	0.4800	0.0056	2456	37	2487	20	2527	25
19WC37-2-73	29.21	57.85	0.50	0.1693	0.0046	11.5216	0.3199	0.4896	0.0062	2551	45	2566	26	2569	27
19WC37-2-74	72.15	113.38	0.64	0.1565	0.0039	10.7302	0.2643	0.4937	0.0056	2418	43	2500	23	2586	24
19WC37-2-75	84.52	99.51	0.85	0.1651	0.0037	11.4481	0.2575	0.4993	0.0047	2509	38	2560	21	2611	20
19WC37-2-76	18.39	35.25	0.52	0.1700	0.0052	11.5578	0.3259	0.4956	0.0071	2557	52	2569	26	2595	31
19WC37-2-77	49.89	82.39	0.61	0.1693	0.0038	11.8774	0.2691	0.5075	0.0061	2550	37	2595	21	2646	26

Table S1 (contiuned).

spots	Element(ppm)		Th/U	Ratios				Ages (Ma)							
	Th	U		²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ	²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ
Sample 19WC37-2															
19WC37-2-78	25.54	49.23	0.52	0.1669	0.0041	11.5672	0.2914	0.5019	0.0062	2528	42	2570	24	2622	27
19WC37-2-79	49.86	81.72	0.61	0.1664	0.0042	11.5879	0.3001	0.5041	0.0057	2521	43	2572	24	2631	25
19WC37-2-80	25.76	44.69	0.58	0.1648	0.0049	11.3088	0.3294	0.5002	0.0068	2505	50	2549	27	2615	29
19WC37-2-81	58.49	76.72	0.76	0.1747	0.0044	12.1835	0.3170	0.5048	0.0062	2603	47	2619	24	2635	27
19WC37-2-82	33.39	68.44	0.49	0.1598	0.0042	10.4810	0.2669	0.4756	0.0054	2453	44	2478	24	2508	23
Sample 19WC43-6															
19WC43-6-01	15.73	40.17	0.39	0.1600	0.0063	9.5380	0.3563	0.4368	0.0075	2455	67	2391	34	2336	34
19WC43-6-02	177.48	240.97	0.74	0.1702	0.0041	11.6714	0.2927	0.4955	0.0059	2561	40	2578	24	2594	25
19WC43-6-03	197.66	277.23	0.71	0.1677	0.0036	11.2587	0.2606	0.4836	0.0050	2535	37	2545	22	2543	22
19WC43-6-04	3.83	14.08	0.27	0.1730	0.0071	10.7889	0.4086	0.4573	0.0079	2587	68	2505	35	2428	35
19WC43-6-05	192.65	264.66	0.73	0.1582	0.0034	10.3477	0.2348	0.4708	0.0048	2437	37	2466	21	2487	21
19WC43-6-06	20.35	81.80	0.25	0.1532	0.0044	10.4850	0.3233	0.4926	0.0078	2383	50	2479	29	2582	34
19WC43-6-07	1.66	8.32	0.20	0.1852	0.0092	12.0198	0.5976	0.4820	0.0118	2700	81	2606	47	2536	51
19WC43-6-08	165.39	279.75	0.59	0.1662	0.0044	11.2159	0.2899	0.4852	0.0047	2520	44	2541	24	2550	20
19WC43-6-09	1.36	7.34	0.19	0.1763	0.0096	12.1644	0.5931	0.5117	0.0122	2620	90	2617	46	2664	52
19WC43-6-10	3.99	21.37	0.19	0.1621	0.0059	10.8295	0.3789	0.4855	0.0079	2477	61	2509	33	2551	34
19WC43-6-11	142.05	229.01	0.62	0.1698	0.0045	10.7007	0.2803	0.4533	0.0045	2567	38	2497	24	2410	20
19WC43-6-13	1.49	7.76	0.19	0.1775	0.0090	12.7459	0.6727	0.5215	0.0151	2631	90	2661	50	2706	64
19WC43-6-14	195.92	334.45	0.59	0.1713	0.0040	11.4725	0.2674	0.4827	0.0043	2572	39	2562	22	2539	19
19WC43-6-15	2.57	11.05	0.23	0.1671	0.0080	10.5890	0.4538	0.4684	0.0092	2529	80	2488	40	2476	41
19WC43-6-16	32.71	53.15	0.62	0.1671	0.0050	11.0311	0.3252	0.4772	0.0054	2528	50	2526	27	2515	24
19WC43-6-17	14.06	19.92	0.71	0.1698	0.0069	10.0293	0.3751	0.4338	0.0083	2555	67	2437	35	2323	37

Table S1 (contiuned).

spots	Element(ppm)		Th/U	Ratios				Ages (Ma)							
	Th	U		²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ	²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ
Sample 19WC43-6															
19WC43-6-18	57.81	93.44	0.62	0.1730	0.0043	12.1087	0.2940	0.5038	0.0047	2587	41	2613	23	2630	20
19WC43-6-19	1.01	5.59	0.18	0.1733	0.0098	12.2545	0.6517	0.5255	0.0124	2591	95	2624	50	2723	52
19WC43-6-20	142.82	240.20	0.59	0.1723	0.0040	11.7029	0.2669	0.4868	0.0046	2580	39	2581	21	2557	20
19WC43-6-22	77.27	122.45	0.63	0.1704	0.0052	11.8131	0.3335	0.4970	0.0056	2561	51	2590	26	2601	24
19WC43-6-23	73.04	99.20	0.74	0.1657	0.0046	11.7705	0.3054	0.5087	0.0051	2517	47	2586	24	2651	22
19WC43-6-24	173.96	242.34	0.72	0.1655	0.0040	10.6469	0.2468	0.4602	0.0040	2512	41	2493	22	2440	18
19WC43-6-26	2.78	9.59	0.29	0.1780	0.0084	13.0723	0.6138	0.5353	0.0115	2635	78	2685	44	2764	48
19WC43-6-27	22.28	56.33	0.40	0.1611	0.0049	11.3003	0.3568	0.5025	0.0076	2478	51	2548	30	2625	33
19WC43-6-28	75.01	123.96	0.61	0.1639	0.0041	11.3274	0.2805	0.4973	0.0055	2496	43	2550	23	2602	24
19WC43-6-29	2.73	15.06	0.18	0.1616	0.0072	10.5774	0.4510	0.4777	0.0077	2473	75	2487	40	2517	34
19WC43-6-30	117.68	127.92	0.92	0.1557	0.0041	9.7898	0.2710	0.4531	0.0062	2410	45	2415	26	2409	27
19WC43-6-32	15.01	31.38	0.48	0.1708	0.0071	10.6256	0.4124	0.4572	0.0080	2565	70	2491	36	2427	36
19WC43-6-33	119.20	196.33	0.61	0.1638	0.0035	10.5510	0.2289	0.4628	0.0039	2495	35	2484	20	2452	17
19WC43-6-34	224.12	278.58	0.80	0.1614	0.0034	10.8761	0.2345	0.4843	0.0041	2472	36	2513	20	2546	18
19WC43-6-35	65.64	221.75	0.30	0.1652	0.0038	10.9311	0.2554	0.4757	0.0048	2510	38	2517	22	2508	21
19WC43-6-36	60.11	179.69	0.33	0.1631	0.0043	13.2217	0.3883	0.5837	0.0097	2488	44	2696	28	2964	39
19WC43-6-37	43.15	80.29	0.54	0.1711	0.0048	11.1515	0.2977	0.4718	0.0055	2568	47	2536	25	2491	24
19WC43-6-38	262.29	332.66	0.79	0.1712	0.0036	11.3659	0.2370	0.4778	0.0036	2569	3	2554	20	2518	16
19WC43-6-39	52.32	128.20	0.41	0.1659	0.0041	10.7431	0.2665	0.4673	0.0048	2517	41	2501	23	2472	21
19WC43-6-40	8.35	28.13	0.30	0.1635	0.0049	10.3118	0.3134	0.4560	0.0062	2492	51	2463	28	2422	28
19WC43-6-41	7.50	29.52	0.25	0.1680	0.0058	11.0752	0.3742	0.4782	0.0063	2539	57	2529	32	2519	27
19WC43-6-42	8.66	23.62	0.37	0.1800	0.0059	12.0125	0.3850	0.4849	0.0070	2653	54	2605	30	2549	30

Table S1 (contiuned).

spots	Element(ppm)		Th/U	Ratios				Ages (Ma)							
	Th	U		²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ	²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ
Sample 19WC43-6															
19WC43-6-43	1.87	8.27	0.23	0.1874	0.0107	11.5929	0.6131	0.4632	0.0103	2720	95	2572	49	2454	46
19WC43-6-44	57.19	100.24	0.57	0.1765	0.0052	11.6320	0.3460	0.4763	0.0056	2620	49	2575	28	2511	25
19WC43-6-45	112.03	181.47	0.62	0.1807	0.0048	11.4951	0.3059	0.4591	0.0043	2659	44	2564	25	2435	19
19WC43-6-46	124.19	170.42	0.73	0.1764	0.0046	11.0118	0.2817	0.4509	0.0041	2619	43	2524	24	2399	18
19WC43-6-47	37.71	51.30	0.74	0.1749	0.0063	11.6929	0.4387	0.4855	0.0079	2605	61	2580	35	2551	34
19WC43-6-48	107.04	182.67	0.59	0.1689	0.0038	11.2128	0.2498	0.4797	0.0041	2547	37	2541	21	2526	18
19WC43-6-49	9.12	14.99	0.61	0.1711	0.0060	11.5808	0.4039	0.4943	0.0088	2568	58	2571	33	2589	38
19WC43-6-50	79.64	109.80	0.73	0.1650	0.0037	10.8223	0.2435	0.4735	0.0040	2509	38	2508	21	2499	18
Sample 19WC43-7															
19WC43-7-01	44.34	347.85	0.13	0.1636	0.0040	10.0257	0.2569	0.4406	0.0051	2494	75	2437	24	2353	23
19WC43-7-02	99.02	96.20	1.03	0.1549	0.0040	8.9392	0.2229	0.4166	0.0043	2800	39	2332	23	2245	20
19WC43-7-03	146.13	182.08	0.80	0.1741	0.0035	11.5752	0.2356	0.4788	0.0045	2598	34	2571	19	2522	20
19WC43-7-04	139.55	464.94	0.30	0.1689	0.0032	10.9557	0.2730	0.4642	0.0066	2547	37	2519	23	2458	29
19WC43-7-05	43.39	157.76	0.28	0.1531	0.0036	8.3106	0.1905	0.3922	0.0044	2381	40	2265	21	2133	20
19WC43-7-06	110.15	192.82	0.57	0.1684	0.0035	11.1216	0.2333	0.4756	0.0047	2542	35	2533	20	2508	20
19WC43-7-07	105.68	76.72	1.38	0.1598	0.0041	9.8569	0.2465	0.4460	0.0054	2453	45	2421	23	2377	24
19WC43-7-09	49.28	157.69	0.31	0.1586	0.0036	10.4297	0.2476	0.4742	0.0062	2443	39	2474	22	2502	27
19WC43-7-10	51.47	143.91	0.36	0.1604	0.0034	10.0563	0.2117	0.4514	0.0045	2461	35	2440	20	2401	20
19WC43-7-11	265.78	514.74	0.52	0.1683	0.0031	10.4847	0.1918	0.4483	0.0041	2543	31	2479	17	2388	18
19WC43-7-12	86.08	186.53	0.46	0.1575	0.0034	9.3681	0.1997	0.4279	0.0041	2429	37	2375	20	2296	19
19WC43-7-13	733.78	1055.42	0.70	0.1689	0.0035	10.5682	0.2423	0.4493	0.0062	2547	29	2486	21	2392	28
19WC43-7-14	58.62	90.73	0.65	0.1604	0.0043	10.6498	0.2897	0.4771	0.0059	2461	46	2493	25	2515	26

Table S1 (contiuned).

spots	Element(ppm)		Th/U	Ratios				Ages (Ma)							
	Th	U		²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ	²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ
Sample 19WC43-7															
19WC43-7-15	95.43	115.21	0.83	0.1677	0.0044	11.2920	0.2940	0.4840	0.0056	2535	49	2548	24	2544	24
19WC43-7-16	20.70	395.06	0.05	0.1570	0.0037	8.8372	0.2004	0.4043	0.0036	2424	41	2321	21	2189	16
19WC43-7-17	61.01	77.89	0.78	0.1689	0.0043	10.7483	0.2646	0.4582	0.0051	2547	42	2502	23	2432	23
19WC43-7-19	60.30	145.00	0.42	0.1481	0.0035	8.7760	0.2313	0.4268	0.0066	2324	41	2315	24	2291	30
19WC43-7-20	55.28	183.37	0.30	0.1518	0.0032	9.1233	0.2028	0.4313	0.0044	2366	35	2350	20	2311	20
19WC43-7-21	206.35	259.99	0.79	0.1751	0.0035	11.5648	0.2315	0.4746	0.0042	2607	33	2570	19	2504	18
19WC43-7-22	187.15	246.35	0.76	0.1692	0.0040	11.0398	0.2664	0.4697	0.0052	2549	40	2526	23	2482	23
19WC43-7-23	61.23	226.65	0.27	0.1632	0.0037	9.7375	0.2242	0.4294	0.0042	2489	39	2410	21	2303	19
19WC43-7-24	73.68	105.51	0.70	0.1580	0.0037	9.8502	0.2322	0.4494	0.0050	2435	41	2421	22	2393	22
19WC43-7-25	139.05	100.16	1.39	0.1563	0.0036	9.6207	0.2256	0.4440	0.0050	2417	39	2399	22	2369	22
19WC43-7-26	83.41	110.41	0.76	0.1655	0.0037	10.3345	0.2296	0.4509	0.0051	2512	37	2465	21	2399	23
19WC43-7-27	281.02	241.33	1.16	0.1700	0.0033	11.0873	0.2127	0.4704	0.0048	2558	33	2530	18	2486	21
19WC43-7-28	109.01	140.44	0.78	0.1697	0.0035	11.4149	0.2428	0.4852	0.0051	2555	34	2558	20	2550	22
19WC43-7-29	81.98	65.81	1.25	0.1637	0.0038	10.4397	0.2455	0.4606	0.0053	2494	39	2475	22	2442	23
19WC43-7-30	128.28	176.74	0.73	0.1675	0.0034	10.8392	0.2176	0.4668	0.0043	2533	35	2509	19	2469	19
19WC43-7-31	118.13	513.20	0.23	0.1560	0.0033	8.8153	0.1916	0.4079	0.0046	2413	37	2319	20	2205	21
19WC43-7-32	604.06	448.73	1.35	0.1635	0.0032	10.3209	0.2084	0.4550	0.0042	2492	33	2464	19	2418	19
19WC43-7-33	80.36	125.36	0.64	0.1668	0.0039	10.4455	0.2466	0.4522	0.0047	2526	39	2475	22	2405	21
19WC43-7-34	157.52	311.63	0.51	0.1764	0.0040	12.2293	0.2833	0.4996	0.0050	2620	38	2622	22	2612	22
19WC43-7-36	118.18	258.60	0.46	0.1706	0.0041	11.5409	0.2835	0.4883	0.0058	2565	40	2568	23	2563	25
19WC43-7-37	320.96	357.06	0.90	0.1718	0.0040	11.3103	0.2626	0.4749	0.0048	2575	39	2549	22	2505	21
19WC43-7-38	494.18	430.17	1.15	0.1758	0.0037	11.7979	0.2539	0.4840	0.0049	2613	35	2589	20	2544	21

Table S1 (contiuned).

spots	Element(ppm)		Th/U	Ratios				Ages (Ma)							
	Th	U		²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ	²⁰⁷ Pb/ ²⁰⁶ Pb	1σ	²⁰⁷ Pb/ ²³⁵ U	1σ	²⁰⁶ Pb/ ²³⁸ U	1σ
Sample 19WC43-7															
19WC43-7-40	51.79	165.85	0.31	0.1763	0.0040	10.6181	0.2497	0.4340	0.0046	2618	38	2490	22	2324	21
19WC43-7-41	153.19	311.05	0.49	0.1703	0.0032	11.5761	0.2254	0.4902	0.0049	2561	32	2571	18	2571	21
19WC43-7-42	56.51	92.37	0.61	0.1668	0.0038	10.2996	0.2319	0.4461	0.0049	2526	39	2462	21	2378	22

Table S2 Major- (wt.%) and trace-element (ppm) compositions of the XWLBL TTG gneisses in Yinshan block.

Sample	19WC01-1	19WC01-2	19WC01-3	19WC04-5	19WC08-1	19WC08-2	19WC08-6	19WC08-7	19WC08-8	19WC16-1
SiO ₂	73.10	70.74	74.46	69.90	67.34	69.25	72.15	67.19	68.02	69.19
TiO ₂	0.24	0.34	0.19	0.13	0.06	0.14	0.09	0.18	0.12	0.38
Al ₂ O ₃	14.62	15.43	14.73	17.85	17.40	16.19	16.22	17.11	17.22	15.36
Fe ₂ O ₃ ^t	2.08	2.86	1.49	0.53	1.92	1.95	0.92	2.31	2.06	3.41
FeO	1.20	1.74	0.70	0.34	1.01	1.00	0.46	1.27	1.03	1.28
MnO	0.02	0.03	0.02	0.01	0.03	0.03	0.01	0.03	0.03	0.04
MgO	0.83	1.11	0.52	0.58	1.28	1.19	0.57	1.37	1.27	0.98
CaO	3.83	4.15	3.74	4.77	4.26	4.01	3.89	4.72	4.31	3.50
Na ₂ O	4.09	4.29	4.28	5.60	4.38	4.10	4.48	4.54	4.38	4.81
K ₂ O	0.55	0.61	0.46	0.18	2.13	1.87	1.13	1.17	1.93	1.37
P ₂ O ₅	0.06	0.10	0.03	0.05	0.12	0.11	0.05	0.12	0.11	0.13
L.O.I	0.32	0.46	0.33	0.37	0.52	0.50	0.44	0.79	0.52	1.07
Total	100.95	101.87	100.94	100.32	100.45	100.31	100.41	100.79	101.01	101.51
Na ₂ O+K ₂ O	16.70	18.30	16.22	18.38	19.32	18.14	17.14	19.42	19.28	18.77
Li	5.6	7.56	4.6	5	12.8	11.4	8.3	14.85	9	8.1
Be	0.7	0.78	0.6	2	1.2	1.1	1.4	1.2	1	1.2
Sc	2.3	3.62	1.5	2	1.9	1.9	0.8	2.0	2	7.3
V	24.81	45.26	19.9	17	14	23.0	13	31.68	22.8	42.9
Cr	12.64	9.91	4.0	12	11	15.2	7	19.79	17	11.4
Co	5.6	7.91	4.1	2	8	7.2	3	7	7	7.3
Ni	10.4	13.63	8.8	12	26	22.5	8.9	16.9	20.1	8.8
Cu	13.3	9.87	15.2	3	80	53.1	7.9	21.6	65.0	8.0
Zn	28.6	38.40	19.5	14	27	25.9	13.8	32.4	25.5	60.3
Ga	15.49	16.62	15.0	15	17.8	16.7	16.3	18	18	21.7

Table S2 (continued).

Sample	19WC01-1	19WC01-2	19WC01-3	19WC04-5	19WC08-1	19WC08-2	19WC08-6	19WC08-7	19WC08-8	19WC16-1
Rb	2.77	3.08	2.79	2.53	18.25	19.51	19.31	15.04	19.71	26.77
Sr	279.90	303.11	298.24	799.77	685.28	643.80	558.64	648.33	675.60	425.94
Y	2.39	2.87	1.05	2.03	2.04	1.78	1.06	1.88	1.96	10.67
Zr	164.11	144.35	113.19	72.96	67.86	53.17	61.40	66.56	65.43	208.12
Nb	1.80	2.90	1.41	1.16	0.27	0.78	0.88	1.26	0.78	6.36
Sn	0.24	0.28	0.22	0.14	0.21	0.32	0.33	0.51	0.34	0.93
Cs	0.06	0.09	0.07	0.15	0.30	0.37	0.83	0.39	0.51	0.30
Ba	423.52	339.54	354.21	140.32	1091.35	939.14	487.38	428.98	937.18	384.21
La	10.18	9.93	9.36	7.81	16.63	15.10	12.56	16.37	17.16	24.45
Ce	16.08	16.78	13.33	11.03	28.22	26.13	19.60	27.90	29.21	47.69
Pr	1.56	1.69	1.12	0.99	2.99	2.70	1.77	2.85	2.98	5.08
Nd	5.10	5.77	3.19	3.32	10.20	9.07	5.42	9.48	10.42	18.33
Sm	0.81	0.91	0.42	0.56	1.38	1.41	0.67	1.44	1.41	3.40
Eu	0.71	0.73	0.67	0.42	0.82	0.77	0.66	0.76	0.80	0.83
Gd	0.58	0.66	0.27	0.45	0.97	0.79	0.41	0.84	0.83	2.67
Tb	0.08	0.10	0.04	0.06	0.11	0.09	0.04	0.08	0.09	0.42
Dy	0.42	0.48	0.17	0.37	0.43	0.38	0.19	0.37	0.41	2.19
Ho	0.08	0.11	0.04	0.08	0.08	0.07	0.03	0.07	0.07	0.40
Er	0.23	0.28	0.12	0.21	0.20	0.16	0.11	0.18	0.19	1.10
Tm	0.03	0.04	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.14
Yb	0.26	0.29	0.15	0.17	0.14	0.14	0.09	0.15	0.16	0.90
Lu	0.04	0.05	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.12
Hf	3.93	3.48	3.17	1.65	1.64	1.29	1.52	1.60	1.56	5.09
Ta	0.08	0.10	0.05	0.02	0.01	0.03	0.07	0.04	0.03	0.31

Table S2 (continued).

Sample	19WC01-1	19WC01-2	19WC01-3	19WC04-5	19WC08-1	19WC08-2	19WC08-6	19WC08-7	19WC08-8	19WC16-1
Tl	0.04	0.02	0.05	0.01	0.13	0.14	0.13	0.11	0.14	0.15
Pb	4.03	3.99	3.85	3.60	9.90	8.99	8.52	8.30	9.35	6.48
Th	0.07	0.05	0.03	0.14	0.07	0.12	0.44	0.16	0.15	1.11
U	0.08	0.10	0.12	0.08	0.06	0.06	0.08	0.05	0.07	0.32
La/Yb	39.79	33.83	62.66	46.29	117.03	105.80	133.77	109.52	110.46	27.12
Th/Ce	0.00	0.00	0.00	0.01	0.00	0.00	0.02	0.01	0.01	0.02
Dy/Yb	1.63	1.64	1.12	2.19	3.02	2.69	2.03	2.50	2.64	2.43
Nb/La	1.63	1.64	1.12	2.19	3.02	2.69	2.03	2.50	2.64	2.43
Nb/Ta	0.03	0.04	0.01	0.03	0.04	0.04	0.01	0.03	0.03	0.30
Rb/Sr	0.01	0.01	0.01	0.00	0.03	0.03	0.03	0.02	0.03	0.06
Sr/Y	116.88	105.67	284.14	393.66	336.42	362.19	528.83	344.10	344.48	39.91
(La/Yb) _N	27.03	22.98	42.57	31.45	79.50	71.87	90.87	74.40	75.04	18.42
Mg [#]	40.89	38.86	42.81	62.92	55.84	54.23	55.38	51.80	55.24	43.34
Eu*	3.00	2.77	5.72	2.46	2.05	2.03	3.57	1.93	2.08	0.81
Sample	19WC16-2	19WC21-4	19WC37-2	19WC37-3	19WC37-4	19WC42-1	19WC42-2	19WC42-3	19WC43-6	19WC43-7
SiO ₂	68.69	66.61	74.92	74.06	74.62	67.83	65.87	66.19	65.44	65.15
TiO ₂	0.35	1.18	0.05	0.10	0.13	0.38	0.43	0.46	0.35	0.33
Al ₂ O ₃	15.49	15.54	14.74	14.69	14.24	15.55	16.50	16.61	16.97	16.95
Fe ₂ O ₃ ^t	3.12	4.99	0.58	0.80	1.41	4.92	5.32	5.00	3.79	3.71
FeO	1.20	3.88	0.25	0.36	0.72	3.35	3.65	3.48	2.30	2.25
MnO	0.05	0.03	0.01	0.01	0.02	0.07	0.08	0.07	0.06	0.06
MgO	0.92	1.93	0.26	0.23	0.51	1.74	1.89	1.72	1.74	1.66
CaO	3.21	3.13	2.60	2.73	2.62	4.65	5.19	5.17	5.17	4.93
Na ₂ O	4.99	3.57	5.37	5.33	5.13	3.77	3.98	4.07	4.11	4.10

Table S2 (continued).

Sample	19WC16-2	19WC21-4	19WC37-2	19WC37-3	19WC37-4	19WC42-1	19WC42-2	19WC42-3	19WC43-6	19WC43-7
K ₂ O	1.30	1.92	0.75	0.86	0.80	0.16	0.17	0.16	1.82	1.77
P ₂ O ₅	0.12	0.34	0.02	0.01	0.01	0.13	0.18	0.18	0.15	0.14
L.O.I	1.15	0.14	0.35	0.52	0.63	0.62	0.72	0.75	0.73	0.97
Total	99.39	99.38	99.65	99.35	100.13	99.82	100.32	100.37	100.33	99.76
Na ₂ O+K ₂ O	1.25	3.91	0.26	0.37	0.74	3.42	3.73	3.55	2.36	2.31
Li	9.0	10.16	2.9	3	5.3	13.0	14.5	12.48	18	21.8
Be	1.1	0.43	0.5	1	0.7	0.7	0.6	0.6	1	0.9
Sc	6.7	5.54	0.7	1	1.2	4.9	5.6	5.2	7	6.1
V	39.63	66.55	5.1	12	18	65.1	73	70.99	56.7	56.1
Cr	10.55	39.51	2.7	6	11	33.0	12	11.33	13	13.4
Co	7.3	10.00	1.1	1	2	11.6	12	11	9	9.0
Ni	8.3	19.86	2.9	3	6	12.1	13.4	12.2	10.7	9.9
Cu	8.3	27.44	3.6	4	6	34.8	41.3	36.0	14.0	18.3
Zn	53.6	59.63	10.6	11	21	55.5	49.5	48.6	46.1	47.7
Ga	21.04	21.49	14.2	15	14.4	16.9	18.0	18	19	18.3
Rb	25.00	52.23	3.31	4.27	4.07	0.82	0.78	0.84	23.57	25.41
Sr	413.78	676.45	610.09	612.59	588.52	574.27	652.56	676.36	665.78	655.10
Y	7.69	9.54	0.44	0.44	0.70	2.79	2.86	2.86	5.91	5.55
Zr	178.16	437.95	79.59	49.74	84.09	80.48	57.23	63.43	67.12	61.99
Nb	6.89	9.20	0.18	0.79	0.87	1.06	1.08	1.20	2.04	1.75
Sn	0.92	0.09	0.07	0.13	0.16	0.26	0.23	0.25	0.47	0.45
Cs	0.29	0.12	0.09	0.09	0.13	0.07	0.04	0.06	0.21	0.27
Ba	413.17	919.66	777.35	758.38	696.79	78.44	90.46	89.73	929.07	797.03
La	24.57	69.39	8.48	7.67	7.39	5.44	5.08	5.37	14.16	11.70

Table S2 (continued).

Sample	19WC16-2	19WC21-4	19WC37-2	19WC37-3	19WC37-4	19WC42-1	19WC42-2	19WC42-3	19WC43-6	19WC43-7
Ce	45.90	128.07	12.29	11.87	11.69	10.65	10.07	10.35	27.42	23.93
Pr	4.77	13.62	1.05	1.14	1.12	1.25	1.33	1.33	3.28	2.91
Nd	16.48	42.16	3.03	3.27	3.43	4.81	5.56	5.50	12.92	11.72
Sm	2.71	6.11	0.23	0.33	0.34	0.86	1.11	1.09	2.36	2.19
Eu	0.74	2.01	0.44	0.52	0.51	0.92	1.05	1.08	0.92	0.86
Gd	2.23	3.87	0.18	0.18	0.21	0.77	0.91	0.93	1.89	1.66
Tb	0.28	0.56	0.02	0.02	0.02	0.09	0.12	0.11	0.23	0.22
Dy	1.66	2.30	0.07	0.08	0.12	0.52	0.57	0.59	1.18	1.11
Ho	0.29	0.35	0.01	0.02	0.03	0.09	0.11	0.10	0.21	0.20
Er	0.77	0.77	0.05	0.05	0.08	0.27	0.29	0.27	0.61	0.59
Tm	0.10	0.08	0.01	0.01	0.01	0.04	0.04	0.04	0.09	0.08
Yb	0.65	0.45	0.08	0.05	0.10	0.25	0.27	0.25	0.57	0.48
Lu	0.10	0.06	0.02	0.01	0.02	0.04	0.04	0.04	0.08	0.07
Hf	4.33	9.78	2.35	1.29	2.25	1.89	1.42	1.51	1.76	1.55
Ta	0.34	0.21	0.01	0.04	0.03	0.04	0.03	0.04	0.05	0.05
Tl	0.13	0.23	0.03	0.02	0.03	0.02	0.01	0.01	0.12	0.12
Pb	6.59	11.51	7.31	7.90	7.58	2.36	2.34	2.41	7.37	6.85
Th	0.80	12.03	0.01	0.02	0.03	0.02	0.02	0.03	0.03	0.03
U	0.22	0.63	0.05	0.03	0.04	0.06	0.05	0.06	0.05	0.04
La/Yb	37.74	154.62	109.42	143.86	72.97	21.48	18.88	21.81	24.69	24.53
Th/Ce	0.02	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dy/Yb	2.55	5.11	0.87	1.48	1.22	2.04	2.13	2.38	2.06	2.33
Nb/La	2.55	5.11	0.87	1.48	1.22	2.04	2.13	2.38	2.06	2.33
Nb/Ta	0.18	0.20	0.00	0.00	0.01	0.08	0.13	0.12	0.20	0.21

Table S2 (continued).

Sample	19WC16-2	19WC21-4	19WC37-2	19WC37-3	19WC37-4	19WC42-1	19WC42-2	19WC42-3	19WC43-6	19WC43-7
Rb/Sr	0.06	0.08	0.01	0.01	0.01	0.00	0.00	0.00	0.04	0.04
Sr/Y	53.78	70.93	1395.83	1392.61	840.46	206.20	228.45	236.88	112.64	118.12
(La/Yb) _N	25.63	105.03	74.33	97.73	49.57	14.59	12.82	14.82	16.77	16.67
Mg [#]	40.89	38.86	42.81	62.92	55.84	54.23	55.38	51.80	55.24	43.34
Eu*	43.26	33.26	51.36	38.88	41.56	34.16	34.08	33.11	43.08	42.40

Note: $\text{Eu}/\text{Eu}^* = \text{Eu}_N / (\text{Sm}_N + \text{Gd}_N)1/2$; $\text{Mg\#} = 100 \times \text{Mg}^{2+} / (\text{Mg}^{2+} + \text{Fe}^{2+} \text{total})$; $\text{MALI} = (\text{Na}_2\text{O} + \text{K}_2\text{O} - \text{CaO})$, $\text{ASI} = [\text{Al}/(\text{Ca} - 1.67 \text{ P} + \text{Na} + \text{K})]$, $(\text{La}/\text{Yb})_N$ are Chondrite-normalized values (from McDonough and Sun, 1995).

Table S3 zircon Hf isotopic data for the XWLBL TTG gneisses in Yinshan block.

Test No.	Age (Ma)	$^{176}\text{Yb}/^{177}\text{Hf}$	1 σ	$^{176}\text{Lu}/^{177}\text{Hf}$	1 σ	$^{176}\text{Hf}/^{177}\text{Hf}$	$\varepsilon_{\text{Hf}}(t)$	T _{DM}	T _{DM} ^C
19WC01-1									
19WC01-1-01	2540	0.006273	0.000116	0.000265	0.000005	0.281252	3.28	2718	2830
19WC01-1-02	2540	0.004703	0.000015	0.000189	0.000001	0.281264	3.70	2702	2804
19WC01-1-05	2540	0.008431	0.000013	0.000336	0.000001	0.281262	3.63	2705	2809
19WC01-1-10	2540	0.006465	0.000021	0.000258	0.000001	0.281252	3.27	2718	2831
19WC01-1-12	2540	0.005446	0.000029	0.000212	0.000001	0.281241	2.89	2732	2854
19WC01-1-16	2540	0.006136	0.000039	0.000243	0.000001	0.281251	3.24	2720	2833
19WC01-1-17	2540	0.005933	0.000022	0.000238	0.000001	0.281255	3.39	2714	2824
19WC01-1-18	2540	0.005220	0.000008	0.000219	0.000000	0.281248	3.15	2723	2838
19WC01-1-19	2540	0.004817	0.000123	0.000210	0.000005	0.281258	3.51	2709	2816
19WC01-1-39	2540	0.005111	0.000018	0.000201	0.000000	0.281250	3.22	2720	2834
19WC01-1-40	2540	0.007060	0.000022	0.000288	0.000001	0.281236	2.71	2740	2865
19WC01-1-41	2540	0.006431	0.000102	0.000254	0.000004	0.281257	3.45	2712	2820
19WC01-1-45	2540	0.006867	0.000016	0.000271	0.000000	0.281264	3.71	2702	2804
19WC01-1-46	2540	0.006651	0.000038	0.000264	0.000001	0.281251	3.23	2720	2833
19WC01-1-50	2540	0.005405	0.000033	0.000229	0.000001	0.281243	2.95	2730	2850
19WC01-1-51	2540	0.006861	0.000049	0.000307	0.000002	0.281280	4.28	2681	2769
19WC01-1-63	2540	0.009303	0.000151	0.000404	0.000008	0.281260	3.56	2708	2813
19WC01-1-65	2540	0.006993	0.000016	0.000272	0.000001	0.281252	3.30	2717	2829
19WC01-1-72	2540	0.006797	0.000026	0.000282	0.000002	0.281262	3.65	2704	2808
19WC01-1-73	2540	0.042543	0.000152	0.001845	0.000009	0.281230	2.52	2756	2877
19WC08-1									
19WC08-1-10	2500	0.003389	0.000035	0.000147	0.000001	0.281282	3.44	2677	2789
19WC08-1-11	2500	0.003821	0.000043	0.000157	0.000001	0.281287	3.60	2671	2780

Table S3 (continued).

Test No.	Age (Ma)	$^{176}\text{Yb}/^{177}\text{Hf}$	1σ	$^{176}\text{Lu}/^{177}\text{Hf}$	1σ	$^{176}\text{Hf}/^{177}\text{Hf}$	$\epsilon_{\text{Hf}}(t)$	TDM	TDMC
19WC08-1									
19WC08-1-16	2500	0.017190	0.000348	0.000709	0.000016	0.281307	4.30	2647	2737
19WC08-1-17	2500	0.004354	0.000025	0.000172	0.000001	0.281289	3.66	2669	2776
19WC08-1-20	2500	0.003825	0.000021	0.000155	0.000000	0.281286	3.56	2673	2782
19WC08-1-21	2500	0.006923	0.000026	0.000301	0.000001	0.281304	4.20	2649	2743
19WC08-1-24	2500	0.020008	0.000069	0.000821	0.000004	0.281301	4.11	2655	2749
19WC08-1-25	2500	0.004887	0.000012	0.000202	0.000001	0.281256	2.49	2713	2848
19WC08-1-35	2500	0.004783	0.000039	0.000191	0.000001	0.281281	3.38	2680	2793
19WC08-1-36	2500	0.001422	0.000040	0.000089	0.000002	0.281305	4.25	2647	2740
19WC08-1-38	2500	0.004592	0.000055	0.000186	0.000002	0.281268	2.93	2697	2821
19WC08-1-39	2500	0.009450	0.000104	0.000409	0.000003	0.281304	4.20	2650	2743
19WC08-1-44	2500	0.004296	0.000036	0.000172	0.000001	0.281258	2.57	2710	2842
19WC08-1-45	2500	0.021203	0.000074	0.000943	0.000004	0.281268	2.91	2701	2822
19WC08-1-63	2500	0.004407	0.000016	0.000176	0.000001	0.281261	2.69	2705	2835
19WC08-1-64	2500	0.013092	0.000039	0.000546	0.000002	0.281293	3.81	2665	2767
19WC08-1-67	2500	0.008164	0.000119	0.000342	0.000006	0.281289	3.68	2669	2775
19WC08-1-68	2500	0.005018	0.000037	0.000209	0.000002	0.281266	2.85	2700	2826
19WC08-1-83	2500	0.017329	0.000113	0.000684	0.000005	0.281288	3.64	2672	2777
19WC08-1-84	2500	0.004715	0.000026	0.000183	0.000000	0.281253	2.40	2716	2853
19WC16-1									
19WC16-1-01	2553	0.021003	0.000540	0.000630	0.000015	0.281236	3.02	2741	2856
19WC16-1-02	2553	0.006141	0.000114	0.000179	0.000004	0.281213	2.18	2770	2907
19WC16-1-05	2553	0.034760	0.000423	0.001038	0.000014	0.281224	2.60	2759	2882
19WC16-1-06	2553	0.023777	0.000371	0.000706	0.000012	0.281214	2.22	2772	2905

Table S3 (continued).

Test No.	Age (Ma)	$^{176}\text{Yb}/^{177}\text{Hf}$	1σ	$^{176}\text{Lu}/^{177}\text{Hf}$	1σ	$^{176}\text{Hf}/^{177}\text{Hf}$	$\epsilon_{\text{Hf}}(t)$	TDM	TDMC
19WC16-1									
19WC16-1-07	2553	0.017233	0.000451	0.000517	0.000012	0.281217	2.33	2767	2898
19WC16-1-08	2553	0.011156	0.000200	0.000335	0.000005	0.281234	2.93	2743	2861
19WC16-1-09	2553	0.009860	0.000058	0.000300	0.000002	0.281238	3.08	2737	2852
19WC16-1-10	2553	0.009374	0.000047	0.000280	0.000001	0.281250	3.50	2721	2827
19WC16-1-16	2553	0.035080	0.000400	0.001171	0.000019	0.281152	0.05	2858	3037
19WC16-1-17	2553	0.012687	0.000058	0.000385	0.000003	0.281187	1.29	2805	2962
19WC16-1-18	2553	0.021355	0.000792	0.000659	0.000024	0.281189	1.35	2804	2958
19WC16-1-19	2553	0.010360	0.000077	0.000311	0.000002	0.281210	2.09	2774	2913
19WC16-1-20	2553	0.017923	0.000248	0.000602	0.000007	0.281155	0.13	2850	3032
19WC16-1-21	2553	0.013210	0.000065	0.000406	0.000004	0.281200	1.74	2788	2934
19WC16-1-24	2553	0.030770	0.000720	0.000928	0.000023	0.281223	2.57	2760	2884
19WC16-1-25	2553	0.051366	0.000446	0.001511	0.000014	0.281223	2.54	2764	2885
19WC16-1-26	2553	0.029386	0.000672	0.001011	0.000020	0.281061	-3.22	2981	3236
19WC16-1-27	2553	0.007863	0.000048	0.000243	0.000001	0.281234	2.94	2742	2861
19WC16-1-36	2553	0.013598	0.000072	0.000414	0.000003	0.281265	4.05	2701	2793
19WC16-1-37	2553	0.011933	0.000072	0.000361	0.000003	0.281242	3.23	2732	2843
19WC37-2									
19WC37-2-03	2540	0.010904	0.000042	0.000458	0.000001	0.281273	4.03	2691	2784
19WC37-2-04	2540	0.015210	0.000084	0.000649	0.000002	0.281281	4.31	2681	2767
19WC37-2-07	2540	0.015229	0.000052	0.000640	0.000001	0.281291	4.67	2667	2745
19WC37-2-08	2540	0.011836	0.000047	0.000502	0.000002	0.281272	4.00	2692	2786
19WC37-2-15	2540	0.018091	0.000027	0.000716	0.000002	0.281283	4.40	2678	2761
19WC37-2-16	2540	0.009223	0.000069	0.000396	0.000003	0.281285	4.45	2675	2759

Table S3 (continued).

Test No.	Age (Ma)	$^{176}\text{Yb}/^{177}\text{Hf}$	1σ	$^{176}\text{Lu}/^{177}\text{Hf}$	1σ	$^{176}\text{Hf}/^{177}\text{Hf}$	$\epsilon_{\text{Hf}}(t)$	TDM	TDMC
19WC37-2									
19WC37-2-24	2540	0.008130	0.000054	0.000357	0.000001	0.281278	4.20	2684	2774
19WC37-2-25	2540	0.019488	0.000280	0.000815	0.000011	0.281302	5.07	2652	2720
19WC37-2-29	2540	0.018375	0.000149	0.000764	0.000009	0.281277	4.17	2687	2776
19WC37-2-30	2540	0.008159	0.000050	0.000346	0.000001	0.281286	4.49	2673	2756
19WC37-2-41	2540	0.009515	0.000034	0.000403	0.000001	0.281262	3.64	2705	2808
19WC37-2-42	2540	0.007519	0.000093	0.000305	0.000002	0.281285	4.47	2674	2758
19WC37-2-52	2540	0.023265	0.000094	0.000924	0.000002	0.281289	4.59	2671	2750
19WC37-2-53	2540	0.009095	0.000118	0.000378	0.000003	0.281288	4.56	2670	2752
19WC37-2-54	2540	0.012610	0.000218	0.000499	0.000006	0.281281	4.31	2680	2767
19WC37-2-55	2540	0.009748	0.000036	0.000392	0.000000	0.281273	4.04	2690	2784
19WC37-2-56	2540	0.011279	0.000049	0.000481	0.000002	0.281274	4.05	2690	2783
19WC37-2-57	2540	0.004511	0.000020	0.000187	0.000000	0.281273	4.01	2690	2785
19WC37-2-73	2540	0.008633	0.000104	0.000361	0.000003	0.281280	4.29	2681	2768
19WC37-2-74	2540	0.025343	0.000075	0.001045	0.000004	0.281278	4.22	2686	2773
19WC43-6									
19WC43-6-02	2566	0.032390	0.000392	0.001027	0.000016	0.281287	5.14	2673	2737
19WC43-6-03	2566	0.012363	0.000113	0.000432	0.000005	0.281254	3.94	2716	2810
19WC43-6-04	2566	0.011599	0.000134	0.000348	0.000005	0.281275	4.71	2687	2763
19WC43-6-05	2566	0.020417	0.000277	0.000655	0.000010	0.281280	4.89	2681	2752
19WC43-6-06	2566	0.012058	0.000102	0.000402	0.000004	0.281266	4.38	2700	2783
19WC43-6-14	2566	0.021563	0.000589	0.000685	0.000016	0.281256	4.02	2715	2805
19WC43-6-18	2566	0.019796	0.000170	0.000645	0.000005	0.281285	5.07	2675	2741
19WC43-6-20	2566	0.021615	0.000245	0.000722	0.000007	0.281264	4.31	2704	2788

Table S3 (continued).

Test No.	Age (Ma)	$^{176}\text{Yb}/^{177}\text{Hf}$	1σ	$^{176}\text{Lu}/^{177}\text{Hf}$	1σ	$^{176}\text{Hf}/^{177}\text{Hf}$	$\epsilon_{\text{Hf}}(t)$	TDM	TDMC
19WC43-6									
19WC43-6-28	2566	0.017444	0.000260	0.000587	0.000011	0.281264	4.32	2703	2786
19WC43-6-33	2566	0.017042	0.000181	0.000573	0.000007	0.281235	3.29	2742	2850
19WC43-6-34	2566	0.020516	0.000432	0.000728	0.000014	0.281259	4.14	2710	2798
19WC43-6-35	2566	0.012097	0.000093	0.000417	0.000003	0.281244	3.60	2729	2831
19WC43-6-36	2566	0.016502	0.000182	0.000549	0.000007	0.281260	4.18	2708	2795
19WC43-6-37	2566	0.015092	0.000115	0.000540	0.000004	0.281269	4.49	2696	2776
19WC43-6-44	2566	0.014689	0.000110	0.000485	0.000005	0.281271	4.55	2694	2773
19WC43-6-45	2566	0.017300	0.000216	0.000660	0.000009	0.281242	3.54	2733	2835
19WC43-6-46	2566	0.018498	0.000055	0.000718	0.000002	0.281237	3.37	2739	2845
19WC43-6-48	2566	0.019611	0.000222	0.000761	0.000010	0.281286	5.11	2673	2739
19WC43-6-49	2566	0.012340	0.000131	0.000440	0.000005	0.281264	4.32	2702	2787
19WC43-6-50	2566	0.015471	0.000107	0.000523	0.000005	0.281258	4.09	2711	2801
19WC43-7									
19WC43-7-03	2550	0.020458	0.000340	0.000673	0.000007	0.281364	7.51	2568	2579
19WC43-7-09	2550	0.044953	0.000509	0.001220	0.000007	0.281270	4.15	2698	2785
19WC43-7-11	2550	0.038542	0.000469	0.001164	0.000010	0.281317	5.82	2633	2683
19WC43-7-13	2550	0.021294	0.000749	0.000577	0.000016	0.281314	5.74	2635	2688
19WC43-7-15	2550	0.018464	0.000678	0.000573	0.000019	0.281223	2.49	2758	2886
19WC43-7-16	2550	0.002583	0.000039	0.000075	0.000001	0.281327	6.19	2617	2660
19WC43-7-17	2550	0.001724	0.000012	0.000051	0.000000	0.281296	5.07	2659	2729
19WC43-7-21	2550	0.044309	0.001945	0.001281	0.000048	0.281321	5.97	2628	2673
19WC43-7-22	2550	0.021423	0.000298	0.000610	0.000007	0.281304	5.38	2649	2709
19WC43-7-27	2550	0.030972	0.001282	0.000980	0.000039	0.281312	5.63	2640	2694

Table S3 (continued).

Test No.	Age (Ma)	$^{176}\text{Yb}/^{177}\text{Hf}$	1σ	$^{176}\text{Lu}/^{177}\text{Hf}$	1σ	$^{176}\text{Hf}/^{177}\text{Hf}$	$\epsilon_{\text{Hf}}(t)$	TDM	TDMC
19WC43-7									
19WC43-7-28	2550	0.022018	0.000182	0.000696	0.000005	0.281318	5.87	2630	2679
19WC43-7-30	2550	0.011755	0.000363	0.000384	0.000010	0.281296	5.08	2659	2728
19WC43-7-31	2550	0.027878	0.000353	0.000835	0.000011	0.281298	5.16	2658	2723
19WC43-7-36	2550	0.016305	0.001772	0.000515	0.000052	0.281301	5.26	2653	2717
19WC43-7-37	2550	0.033285	0.001126	0.000953	0.000028	0.281301	5.27	2654	2716
19WC43-7-38	2550	0.050919	0.002065	0.001526	0.000056	0.281295	5.06	2664	2729
19WC43-7-39	2550	0.022748	0.000553	0.000664	0.000016	0.281296	5.08	2660	2728
19WC43-7-40	2550	0.018074	0.000488	0.000549	0.000014	0.281288	4.80	2671	2745
19WC43-7-41	2550	0.010053	0.000741	0.000279	0.000020	0.281273	4.27	2690	2777
19WC43-7-42	2550	0.010551	0.000139	0.000383	0.000005	0.281294	4.99	2663	2733

Table S4. Whole-rock Sr-Nd isotopic compositions of the XWLBL TTG gneisses in Yinshan block.

Sample	Age (Ma)	Rb(ppm)	Sr(ppm)	$^{87}\text{Rb}/^{86}\text{Sr}$	$(^{87}\text{Sr}/^{86}\text{Sr})_i$	Sm(ppm)	Nd(ppm)	$^{147}\text{Sm}/^{144}\text{Nd}$	$(^{143}\text{Nd}/^{144}\text{Nd})_i$	$\epsilon_{\text{Nd}}(t)$	$T_{\text{DM}}^1(\text{Ma})$	$T_{\text{DM}}^2(\text{Ma})$
19WC01-2	2550	3.08	303	0.703606	0.702522	0.91	5.77	0.094899	0.509386	1.10	2769	2822
19WC04-5	2550	2.53	800	0.702973	0.702636	0.56	3.32	0.101914	0.509107	-4.38	3157	3259
19WC37-4	2550	4.07	589	0.702479	0.701742	0.34	3.43	0.059994	0.509511	3.55	2597	2625
19WC42-3	2550	0.84	676	0.702085	0.701953	1.09	5.50	0.119672	0.509318	-0.23	2934	2928
19WC43-6	2550	23.6	666	0.705435	0.701660	2.36	12.9	0.110298	0.509422	1.81	2749	2765
19WC43-7	2550	25.4	655	0.705877	0.701740	2.19	11.7	0.112976	0.509421	1.79	2756	2767

Table S5. Whole-rock Pb isotopic compositions of the XWLBL TTG gneisses in Yinshan block.

Sample	$^{206}\text{Pb}/^{204}\text{Pb}$	2σ	$^{207}\text{Pb}/^{204}\text{Pb}$	2σ	$^{208}\text{Pb}/^{204}\text{Pb}$	2σ	Pb(ppm)	Th(ppm)	U(ppm)	$(^{206}\text{Pb}/^{204}\text{Pb})_t$	$(^{207}\text{Pb}/^{204}\text{Pb})_t$	$(^{208}\text{Pb}/^{204}\text{Pb})_t$
19WC01-2	14.786	0.000621	14.982	0.000682	34.010	0.001722	3.99	0.05	0.10	14.050092	14.857363	33.900075
19WC04-5	15.910	0.000698	15.373	0.000769	35.919	0.001876	3.60	0.14	0.08	15.241165	15.259938	35.592728
19WC37-4	14.112	0.000480	14.844	0.000517	33.793	0.001524	7.58	0.03	0.04	13.957591	14.817756	33.758622
19WC42-3	14.647	0.000824	14.954	0.000955	34.003	0.002226	2.41	0.03	0.06	13.910485	14.829711	33.903032
19WC43-6	14.191	0.000427	14.843	0.000562	33.809	0.001390	7.37	0.03	0.05	13.976161	14.806724	33.770932
19WC43-7	14.220	0.000580	14.854	0.000695	33.874	0.001617	6.85	0.03	0.04	14.048283	14.824793	33.838054