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Supplemental Material

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Analytical methods

Zircon U–Pb dating

Zircon separation from the bulk rock was carried out using magnetic and density techniques at the Langfang Regional Geological Survey Institute in the Hebei Province, China. The Cathodoluminescence (CL) images of zircons without visible inclusions were collected in the electron microprobe laboratory at the State Key Laboratory of Geological Processes and Mineral Resources (GPMR), China University of Geosciences (CUG), Wuhan.

Zircon laser ablation inductively coupled plasma mass spectrometer (LA-ICP-MS) U-Pb dating was conducted at the State Key Laboratory for Mineral Deposits Research (MDR), Nanjing University (for Qurelong Monzodiorite, Kengdenongshe Intrusion, biotite monzogranite and quartz diorite from the Walega Intrusive Complex) and GPMR (for Langmuri Intrusion) respectively. At the MDR, we used an Agilent 7500 ICP-MS equipped with a New Wave Research 213 nm laser ablation system to acquire ion-signal intensities. The beam diameter was 30 μm and the carrier gas was Helium which was mixed with Argon in a mixing chamber. GJ-1 and Mud Tank zircon standards were analyzed between each 6 unknown sample spot analyses. Detailed analytical procedures are similar to those summarized by Jackson et al. (2004). At the GPMR, we use the same mass spectrometer equipped with a GeoLas 2005 laser system. The carrier and mixing gases, and analytical procedures are almost the same as that at the MDR, but with a larger beam diameter (32 um) and different standards (91500 and GJ-1) (Liu et al., 2010). The off-line data reduction was conducted using *GLITTER* and *ICPMSDataCal* for data obtained from the MDR and GPMR respectively (Liu et al., 2010). Common Pb contents were evaluated using the method described by Andersen (2002). Concordia diagrams and weighted mean calculations were made using the Isoplot Version 3.75 (Ludwig, 2012).

Major and trace elements determination

Fresh rock samples were crushed and powdered to less than 200 mesh by an agate ring mill. The major element analyses were carried out at the Australian Laboratory Services' (ALS) Chemex (Guangzhou) Co. Ltd using X-ray fluorescence (XRF) spectrometer. The analytical precision is better than 5%.

Trace elements of samples were analyzed at the GPMR. $HF+HNO_3$ was used to digest powdered samples in Teflon bombs. Data were obtained using Agilent 7500 ICP–MS, and rock standards (AGV-2, BHVO-2, BCR-2, and RGM-2 at the GPMR) were also analyzed during the processes. The analytical precision is better than 10%. The detailed sample-digesting procedure for ICP–MS analysis is the same as Liu et al. (2008).

Sr–Nd isotope analyses

Sr-Nd compositions of samples from the Xiangride-Kuhai area were analyzed in the GPMR using Finnigan Mat 262 thermal ionization mass spectrometer. Sample powders were firstly spiked with mixed isotope tracers and then dissolved with $HCl+HClO_4/HNO_3$ mixing acids. Conventional cation exchange techniques were used to separate the isotopes. $^{146}Nd/^{144}Nd$ and $^{88}Sr/^{86}Sr$ values were normalized to

0.7219 and 8.3752 respectively to correct mass fractionation. Sr (NBS987) and Nd (BCR-2) standards were analyzed to monitor the instrument working conditions during analysis. The precisions for $^{87}Rb/^{86}Sr$, $^{147}Sm/^{144}Nd$ are better than 1% and 0.5%, respectively.

In situ Hf isotope determination

In situ zircon Lu–Hf isotope analyses were carried out on the dated zircon grains with sampling spots identical to U-Pb analyses or in the same oscillatory zones. Zircons from the Qurelong Monzodiorite, Kengdenongshe Intrusion, and biotite monzogranite and quartz diorite of the Walega Intrusive Complex were conducted at the MDR using a New Wave UP193FX laser-ablation system combined with a Neptune multi-collector ICP-MS. The analytical process and instrument conditions were similar to those described by Hou et al. (2007). Samples were collected by the laser beam with a diameter of 35μm and then the ablated samples were transported to the ICP-MS torch through He and Ar carrier gases. The isotopes were measured simultaneously in the static-collection mode. Correction for isobaric interferences followed Iizuka and Hirata (2005). To monitor instrument performance conditions and analytical accuracy, the reference zircon Mud Tank and the standard zircon 91500 were analyzed during the process, yielding $^{176}Hf/^{177}Hf$ values of 0.282495 ± 0.000019 (2σ) and 0.282302 ± 0.000024 (2σ) respectively.

Lu-Hf isotopic data of zircons from the Langmuri Intrusion were gained using a Neptune Plus MC-ICP-MS combined with a Geolas 2005 excimer ArF laser ablation system at the GPRM. The sampling spot size was 44 um and the energy density applied was 15–20 J/cm^2 during analyses. Zircon 91500 as an external standard and GJ-1 as unknown were analyzed simultaneously (Hu et al., 2012). The obtained Hf isotope compositions were 0.282322 ± 0.000015 (1σ) for 91500 and 0.282018 ± 0.000014 (1σ) for GJ-1. Off-line selection and integration of analytical signals and mass bias calibrations were carried out using *ICPMSDataCal* (Liu et al., 2008).

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Table S6. LA–ICP–MS zircon U–Pb dating data of intrusions from the Xiangride-Kuhai, EKO

Spot	Th	U	Th/U	U-Th-Pb isotopic ratio						Age (Ma)					
No.	ppm	ppm		$^{207}Pb/^{206}Pb$	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
Qurelong Monzodiorite from the South Kunlun Belt (B1301-1)															
01	199	204	0.98	0.0560	0.0015	0.5880	0.0153	0.0759	0.0008	454	57	470	10	472	5
02	156	216	0.72	0.0577	0.0014	0.6030	0.0139	0.0757	0.0007	520	52	479	9	470	4
03	259	361	0.72	0.0560	0.0011	0.5887	0.0117	0.0759	0.0007	454	44	470	8	471	4
04	335	360	0.93	0.0575	0.0011	0.6047	0.0123	0.0758	0.0006	509	44	480	8	471	4
05	210	259	0.81	0.0587	0.0015	0.6136	0.0156	0.0757	0.0009	554	56	486	10	470	5
06	456	554	0.82	0.0597	0.0012	0.6268	0.0131	0.0755	0.0008	591	43	494	8	469	5
07	293	402	0.73	0.0565	0.0012	0.5929	0.0131	0.0756	0.0007	478	42	473	8	470	4
08	356	456	0.78	0.0579	0.0012	0.6086	0.0128	0.0756	0.0007	528	43	483	8	470	4
09	362	433	0.84	0.0585	0.0011	0.6140	0.0119	0.0758	0.0008	550	41	486	7	471	5
10	346	446	0.78	0.0567	0.0011	0.5962	0.0125	0.0758	0.0007	480	43	475	8	471	4
11	370	383	0.97	0.0586	0.0012	0.6123	0.0128	0.0758	0.0008	550	44	485	8	471	5
12	328	386	0.85	0.0561	0.0012	0.5892	0.0129	0.0758	0.0007	454	48	470	8	471	4
13	252	329	0.76	0.0565	0.0013	0.5930	0.0142	0.0760	0.0008	472	52	473	9	472	5
14	295	392	0.75	0.0560	0.0011	0.5886	0.0125	0.0759	0.0008	454	44	470	8	472	5
15	133	184	0.72	0.0588	0.0018	0.6159	0.0191	0.0758	0.0009	561	69	487	12	471	5
16	299	405	0.74	0.0571	0.0011	0.5994	0.0121	0.0758	0.0007	494	43	477	8	471	4
17	258	367	0.70	0.0573	0.0013	0.6015	0.0146	0.0759	0.0009	506	50	478	9	471	5
18	120	187	0.64	0.0791	0.0014	2.2186	0.0411	0.2031	0.0021	1176	34	1187	13	1192	11
Kengdenongshe Intrusion from the Central Kunlun Belt (B8142-3)															
01	690	1238	0.56	0.0820	0.0018	0.8093	0.0217	0.0716	0.0009	1247	43	602	12	446	6
02	16	680	0.02	0.0563	0.0019	0.5524	0.0168	0.0712	0.0009	463	75	447	11	443	6
03	687	1798	0.38	0.0718	0.0016	0.7098	0.0191	0.0717	0.0009	981	44	545	11	446	6
04	25	828	0.03	0.0573	0.0013	0.5736	0.0160	0.0726	0.0010	504	50	460	10	452	6
05	585	1691	0.35	0.0665	0.0015	0.6611	0.0181	0.0721	0.0010	822	46	515	11	449	6

06	81	1082	0.08	0.0727	0.0015	0.7270	0.0192	0.0725	0.0010	1006	42	555	11	451	6
07	75	1473	0.05	0.0601	0.0027	0.5887	0.0271	0.0710	0.0012	608	92	470	17	442	7
08	171	355	0.48	0.0602	0.0021	0.5987	0.0231	0.0721	0.0011	612	75	476	15	449	6
09	74	786	0.09	0.0579	0.0022	0.5653	0.0198	0.0708	0.0010	526	84	455	13	441	6
10	18	394	0.05	0.0753	0.0023	0.7417	0.0251	0.0714	0.0010	1077	59	563	15	445	6
11	23	826	0.03	0.0608	0.0014	0.6011	0.0171	0.0717	0.0010	633	50	478	11	446	6
12	83	83	1.00	0.0769	0.0020	2.0364	0.0606	0.1921	0.0026	1119	50	1128	20	1133	14
13	85	84	1.01	0.0840	0.0020	1.9394	0.0559	0.1675	0.0023	1292	46	1095	19	999	13
Biotite monzogranite from the Walega Intrusive Complex, Central Kunlun Belt (B1107)															
01	239	333	0.72	0.0568	0.0014	0.5555	0.0162	0.0710	0.0010	483	55	449	11	442	6
02	226	606	0.37	0.0554	0.0023	0.5368	0.0205	0.0703	0.0010	428	93	436	14	438	6
03	143	328	0.44	0.0696	0.0015	1.4881	0.0398	0.1551	0.0021	917	44	926	16	929	11
04	139	462	0.30	0.0545	0.0012	0.5346	0.0149	0.0711	0.0010	393	52	435	10	443	6
05	132	370	0.36	0.0563	0.0024	0.5445	0.0224	0.0702	0.0010	464	99	441	15	437	6
06	333	563	0.59	0.0548	0.0030	0.5358	0.0277	0.0709	0.0010	405	124	436	18	441	6
07	627	452	1.39	0.0645	0.0015	0.6313	0.0181	0.0710	0.0010	759	51	497	11	442	6
08	71	89	0.80	0.0801	0.0018	2.2784	0.0640	0.2062	0.0028	1200	46	1206	20	1209	15
09	104	242	0.43	0.0549	0.0013	0.5365	0.0150	0.0709	0.0009	406	52	436	10	442	6
10	127	466	0.27	0.0609	0.0014	0.5966	0.0169	0.0711	0.0010	635	52	475	11	443	6
11	287	483	0.59	0.0672	0.0028	1.3118	0.0507	0.1416	0.0019	843	87	851	22	854	11
12	217	586	0.37	0.0557	0.0014	0.5420	0.0162	0.0706	0.0010	440	58	440	11	440	6
13	193	295	0.65	0.0551	0.0013	0.5361	0.0155	0.0706	0.0009	416	55	436	10	440	6
14	398	697	0.57	0.0593	0.0013	0.5783	0.0158	0.0708	0.0009	577	49	463	10	441	6
15	106	247	0.43	0.0577	0.0029	0.5556	0.0267	0.0698	0.0010	520	113	449	17	435	6
16	92	287	0.32	0.0569	0.0014	0.5550	0.0165	0.0708	0.0010	487	57	448	11	441	6
17	61	433	0.14	0.0564	0.0014	0.5496	0.0160	0.0707	0.0010	467	55	445	10	440	6
18	152	397	0.38	0.0544	0.0013	0.5284	0.0151	0.0705	0.0009	386	55	431	10	439	6
Quartz diorite from the Walega Intrusive Complex, Central Kunlun Belt (B70002-2)															
01	915	1493	0.61	0.0545	0.0012	0.5209	0.0116	0.0693	0.0007	394	50	426	8	432	4

02	986	1766	0.56	0.0548	0.0011	0.5224	0.0110	0.0689	0.0006	467	44	427	7	430	4
03	857	1364	0.63	0.0563	0.0012	0.5399	0.0129	0.0694	0.0008	461	48	438	8	432	5
04	1241	1800	0.69	0.0577	0.0014	0.5533	0.0169	0.0689	0.0008	517	54	447	11	429	5
05	892	1479	0.60	0.0549	0.0011	0.5219	0.0102	0.0689	0.0006	409	44	426	7	429	3
06	823	1205	0.68	0.0549	0.0012	0.5251	0.0122	0.0693	0.0007	406	45	429	8	432	4
07	210	1786	0.12	0.0559	0.0015	0.5310	0.0147	0.0688	0.0008	450	61	432	10	429	5
08	1218	1692	0.72	0.0552	0.0010	0.5291	0.0105	0.0694	0.0007	420	36	431	7	432	4
09	884	1143	0.77	0.0547	0.0011	0.5233	0.0108	0.0694	0.0007	398	44	427	7	432	4
10	581	1071	0.54	0.0578	0.0012	0.5486	0.0109	0.0690	0.0006	520	46	444	7	430	4
11	1936	2573	0.75	0.0557	0.0009	0.5343	0.0093	0.0692	0.0006	439	5	435	6	432	3
12	1201	1840	0.65	0.0542	0.0012	0.5187	0.0112	0.0693	0.0007	376	53	424	8	432	4
13	1082	2509	0.43	0.0532	0.0010	0.5100	0.0107	0.0693	0.0008	345	44	418	7	432	5
14	875	2562	0.34	0.0615	0.0014	0.5860	0.0136	0.0687	0.0006	657	50	468	9	429	4
15	933	1385	0.67	0.0550	0.0013	0.5264	0.0121	0.0693	0.0008	413	47	429	8	432	5
16	1027	1955	0.53	0.0571	0.0012	0.5475	0.0123	0.0690	0.0005	494	44	443	8	430	3
17	1195	2063	0.58	0.0527	0.0010	0.5032	0.0093	0.0690	0.0006	322	47	414	6	430	4
18	321	2861	0.11	0.0559	0.0013	0.5335	0.0122	0.0688	0.0006	450	52	434	8	429	4
Langmuri Intrusion from the Central Kunlun Belt (CL290)															
01	383	1931	0.20	0.0723	0.0010	1.4761	0.0200	0.1476	0.0010	994	34	921	8	888	6
02	137	481	0.29	0.0552	0.0018	0.4989	0.0150	0.0656	0.0007	420	77	411	10	410	4
03	147	662	0.22	0.0553	0.0018	0.5029	0.0176	0.0657	0.0008	433	74	414	12	410	5
04	116	379	0.30	0.0550	0.0014	0.5039	0.0136	0.0662	0.0008	413	62	414	9	413	5
05	52	267	0.19	0.0564	0.0019	0.5096	0.0180	0.0653	0.0008	478	72	418	12	408	5
06	58	249	0.23	0.0549	0.0021	0.4962	0.0185	0.0655	0.0008	409	87	409	13	409	5
07	146	553	0.26	0.0539	0.0011	0.4913	0.0117	0.0658	0.0008	369	46	406	8	411	5
08	89	186	0.48	0.0853	0.0021	2.6196	0.0694	0.2221	0.0030	1324	47	1306	19	1293	16
09	86	265	0.32	0.0528	0.0018	0.4760	0.0181	0.0651	0.0008	320	80	395	12	407	5
10	95	464	0.21	0.0730	0.0014	1.2303	0.0449	0.1209	0.0033	1017	39	814	20	736	19
11	197	614	0.32	0.0557	0.0011	0.5027	0.0097	0.0654	0.0005	443	43	414	7	409	3

12	48	347	0.14	0.0563	0.0015	0.5054	0.0140	0.0651	0.0009	465	59	415	9	406	5
13	551	816	0.68	0.0882	0.0015	2.7978	0.0516	0.2295	0.0021	1387	33	1355	14	1332	11
14	63	176	0.36	0.0565	0.0021	0.5942	0.0280	0.0757	0.0019	472	81	474	18	470	11
15	329	726	0.45	0.0555	0.0021	0.4944	0.0167	0.0646	0.0012	435	86	408	11	404	7
16	188	540	0.35	0.0552	0.0015	0.4975	0.0142	0.0653	0.0005	420	58	410	10	408	3
17	161	676	0.24	0.0564	0.0012	0.5068	0.0113	0.0650	0.0005	478	44	416	8	406	3
18	139	462	0.30	0.0605	0.0018	0.5461	0.0183	0.0652	0.0008	633	60	442	12	407	5
19	121	443	0.27	0.0609	0.0022	0.5533	0.0217	0.0660	0.0014	635	84	447	14	412	9
20	149	467	0.32	0.0548	0.0012	0.4931	0.0113	0.0654	0.0006	467	52	407	8	408	3

Table S7. Major (wt.%) and trace elements (ppm) compositions of intrusions from the Xiangride-Kuhai, EKO

Sample No.	B1301-1	B1302-1	B1303-1	B1305-1	B1307-1	B1308-1	B1309-1	B1311-1	B1312-1	B1313-1	B7191-1	B8166-2	B8139-2	B8142-1	B8142-2	B8155-1
	Qurelong Monzodiorite from the South Kunlun Belt										Kengdenongshe Intrusion from the Central Kunlun Belt					
SiO_2	52.01	51.55	52.52	52.03	53.18	55.64	53.54	52.28	51.20	53.25	73.00	72.10	70.80	70.90	73.30	75.20
TiO2	1.36	1.34	1.32	1.34	1.28	1.13	1.30	1.30	1.40	1.26	0.27	0.40	0.43	0.52	0.27	0.10
Al_2O_3	16.61	16.36	16.52	16.50	16.42	15.88	15.90	16.78	16.80	16.76	13.70	14.10	14.55	14.30	13.90	12.85
Fe_2O_3	10.24	9.60	9.46	9.77	9.21	8.29	9.02	9.45	10.28	9.00	1.85	1.94	2.12	2.40	1.48	1.58
MnO	0.16	0.16	0.15	0.16	0.15	0.13	0.14	0.16	0.16	0.14	0.04	0.04	0.04	0.04	0.03	0.04
MgO	4.38	4.27	4.38	4.34	4.41	4.13	4.56	4.45	4.64	4.28	0.52	0.81	0.86	1.00	0.62	0.17
CaO	7.64	7.38	7.16	7.39	7.09	6.36	7.00	7.51	7.71	6.89	1.01	1.35	1.16	1.05	1.64	0.85
Na_2O	3.37	3.29	3.35	3.34	3.26	3.04	3.00	3.45	3.35	3.47	3.69	4.09	3.84	3.39	4.78	3.54
K_2O	1.79	2.29	2.09	2.06	2.17	2.61	2.49	1.74	1.92	2.07	3.92	3.30	3.84	3.74	2.86	3.99
P_2O_5	0.66	0.61	0.63	0.63	0.55	0.45	0.49	0.60	0.66	0.55	0.06	0.10	0.10	0.12	0.08	0.02
LOI	1.63	2.65	1.70	1.99	1.75	1.49	2.27	1.63	1.65	1.70	1.63	1.93	2.03	2.10	1.75	1.23
Total	100.28	99.92	99.69	99.96	99.90	99.59	100.10	99.78	100.21	99.81	99.86	100.32	99.95	99.74	100.90	99.77
$Mg^{\#}$	73.6	73.4	60.6	69.2	68.3	66.6	71.8	66.3	72.0	64.7	35.5	45.3	28.1	28.6	13.6	4.8
Sc	25.10	27.50	26.30	26.30	26.60	24.20	27.40	28.00	28.90	24.50	12.37	13.20	8.64	8.59	17.80	16.10
V	268.0	292.0	267.0	275.7	261.8	231.0	272.0	276.0	287.0	243.0	17.8	35.6	26.1	31.0	40.2	9.4
Cr	47.7	63.7	80.6	64.0	96.6	141.0	132.0	77.7	64.0	68.4	8.1	12.5	8.1	9.1	15.9	8.1
Co	61.40	59.10	82.20	67.57	78.54	55.70	120.00	79.40	66.70	70.90	140.50	119.50	118.00	77.00	162.00	163.00
Ni	41.3	45.7	64.1	50.4	58.6	55.9	80.9	59.4	46.9	50.1	68.0	53.9	50.0	39.1	68.7	85.9
Ga	24.5	24.5	23.9	24.3	23.8	21.8	22.2	25.3	26.1	23.8	24.6	27.1	18.7	20.4	33.8	30.4
Rb	56	80	65	67	74	87	107	55	60	63	205	162	144	145	178	266
Sr	950	929	840	906	837	800	695	906	942	844	175	263	128	112	413	221
Y	30.80	29.50	36.20	32.17	28.90	26.80	26.10	29.00	34.40	28.20	30.95	16.60	13.80	12.70	20.50	48.10
Zr	142	158	279	193	217	204	209	245	177	250	190	264	175	205	322	204
Nb	20.60	23.00	23.00	22.20	20.98	17.70	20.00	22.40	24.90	19.90	20.15	20.45	15.90	20.40	20.50	24.40

Ba	1050	1170	1020	1080	990	1050	860	1080	931	1030	1381	1080	561	589	1570	2200
La	67.90	95.50	54.50	72.63	59.46	54.90	50.40	57.30	59.60	75.10	53.80	63.50	42.00	42.90	84.10	65.60
Ce	115.00	148.00	103.00	122.00	99.80	91.60	83.60	98.80	107.00	118.00	91.45	105.05	71.90	72.10	138.00	111.00
Pr	14.10	15.80	12.90	14.27	11.78	10.70	9.98	11.70	13.00	13.50	9.79	10.90	7.57	7.50	14.30	12.00
Nd	50.30	53.70	48.80	50.93	42.56	38.80	35.00	43.30	48.90	46.80	30.50	33.45	23.20	23.40	43.50	37.80
Sm	9.57	8.82	9.68	9.36	7.89	7.34	6.86	8.02	9.08	8.14	5.44	4.90	3.55	3.40	6.40	7.32
Eu	2.33	2.14	2.17	2.22	1.95	1.85	1.67	1.96	2.27	1.99	0.85	1.08	0.67	0.65	1.50	1.02
Gd	8.29	6.93	8.09	7.77	6.77	6.48	5.97	6.75	7.84	6.79	4.89	3.77	2.83	2.63	4.91	6.95
Tb	1.06	0.94	1.21	1.07	0.91	0.83	0.85	0.94	1.06	0.89	0.82	0.53	0.42	0.37	0.69	1.22
Dy	5.54	4.62	5.80	5.32	4.80	4.48	4.41	4.84	5.49	4.77	4.70	2.65	2.18	1.95	3.35	7.22
Ho	1.05	0.85	1.15	1.02	0.91	0.87	0.82	0.89	1.05	0.91	1.01	0.54	0.46	0.42	0.66	1.55
Er	2.89	2.57	3.35	2.94	2.62	2.54	2.46	2.72	2.76	2.62	3.14	1.65	1.44	1.34	1.95	4.83
Tm	0.38	0.34	0.43	0.38	0.35	0.34	0.32	0.37	0.40	0.33	0.49	0.25	0.23	0.21	0.29	0.74
Yb	2.27	2.04	2.86	2.39	2.16	2.03	1.98	2.08	2.53	2.20	3.43	1.75	1.69	1.48	2.01	5.17
Lu	0.31	0.28	0.41	0.33	0.31	0.30	0.28	0.29	0.37	0.30	0.52	0.27	0.26	0.24	0.30	0.78
Hf	3.12	3.09	5.80	4.00	4.18	4.23	3.63	4.66	3.56	4.80	5.53	6.80	4.55	5.23	8.36	6.50
Ta	1.23	1.20	1.33	1.25	1.25	1.01	1.51	1.28	1.33	1.10	3.17	3.32	2.44	2.37	4.27	3.91
Pb	17.1	17.7	17.2	17.3	16.6	19.1	14.8	19.0	14.5	15.5	59.6	30.7	28.2	22.5	38.9	90.9
Th	11.40	19.50	8.60	13.17	9.54	12.60	4.99	6.60	9.81	13.70	28.75	37.15	23.00	25.80	48.50	34.50
U	1.79	2.88	1.77	2.15	1.85	2.19	1.04	1.98	2.03	2.01	4.66	4.50	2.59	2.72	6.27	6.72
Eu/Eu^*	0.78	0.81	0.73	0.77	0.79	0.80	0.78	0.79	0.80	0.80	0.49	0.74	0.62	0.64	0.79	0.43
Sr/Y	30.8	31.5	23.2	28.5	29.0	29.9	26.6	31.2	27.4	29.9	5.6	15.8	9.3	8.8	20.1	4.6
$(La/Yb)_N$	21.5	33.6	13.7	22.9	19.8	19.4	18.3	19.8	16.9	24.5	11.3	26.1	17.8	20.8	30.0	9.1

TABLE 2 CONTINUED

Sample No.	B1107-1	B1108-1	B1109-1	B1114-1	B1115-1	B1116-1	B1118-1	B1119-1	B1120-1	B0802-1	B60003-1	B60003-2	B60003-3	B70002-2-1	B70801-1
	Biotite monzogranite from the Walega Intrusive Complex, Central Kunlun Belt										Quartz diorite from the Walega Intrusive Complex, Central Kunlun Belt				
SiO_2	67.90	69.10	70.30	70.30	72.00	72.40	69.60	69.70	70.50	68.49	57.66	62.04	56.72	57.08	53.86
TiO2	0.28	0.47	0.44	0.54	0.30	0.18	0.52	0.37	0.34	0.46	1.50	1.11	1.72	1.38	2.02
Al_2O_3	17.30	14.75	14.75	14.65	14.35	15.45	15.15	14.90	14.60	15.20	15.55	15.95	15.17	15.98	14.71
Fe_2O_3	2.13	1.65	2.99	2.81	2.20	1.32	3.60	2.77	2.35	3.78	9.28	6.76	9.86	9.63	11.46
MnO	0.03	0.04	0.04	0.05	0.04	0.02	0.05	0.04	0.04	0.06	0.14	0.09	0.15	0.16	0.18
MgO	1.20	0.87	0.94	0.99	0.63	0.66	0.99	0.72	0.72	1.04	2.69	1.82	3.08	2.59	3.67
CaO	4.00	3.06	2.71	2.04	1.91	2.32	2.60	2.01	2.19	3.04	5.41	4.58	5.69	5.32	6.32
Na_2O	4.52	2.40	3.13	2.84	3.37	4.84	3.41	3.77	3.11	3.11	3.61	3.39	3.75	3.57	3.87
K_2O	1.58	6.02	3.84	4.67	4.11	2.26	3.46	4.10	4.22	3.26	2.09	2.20	1.80	2.40	1.66
P_2O_5	0.09	0.15	0.14	0.14	0.10	0.06	0.22	0.23	0.10	0.15	0.58	0.39	0.41	0.93	0.41
LOI	1.12	0.82	0.82	1.19	1.15	0.74	1.05	0.99	0.90	0.98	0.86	0.87	0.94	0.88	0.84
Total	100.35	99.67	100.43	100.46	100.38	100.38	100.97	99.81	99.37	99.88	99.83	99.76	99.75	100.34	99.38
$Mg^{\#}$	24.3	9.8	12.7	11.2	11.2	19.9	12.8	10.5	11.7	25.1	37.6	23.9	43.1	37.9	50.8
Sc	15.50	21.20	20.20	20.90	18.80	17.10	24.30	23.90	19.00	9.29	22.33	17.30	25.07	20.90	28.80
V	64.2	82.2	89.9	84.2	52.0	31.3	96.8	70.8	59.3	46.2	135.4	87.1	166.4	112.0	207.0
Cr	38.2	27.0	38.0	53.2	20.8	26.7	22.0	19.4	22.1	134.0	34.5	23.3	40.1	37.8	42.5
Co	165.00	209.00	330.00	401.00	235.00	416.00	329.00	229.00	306.00	65.40	62.43	75.20	61.67	51.00	61.10
Ni	83.8	81.9	159.0	202.0	102.0	206.0	130.0	111.0	126.0	82.3	35.4	36.5	34.8	33.4	36.3
Ga	41.9	36.7	40.5	45.1	40.5	41.9	45.5	50.1	39.1	18.1	21.4	23.2	20.3	22.4	18.5
Rb	118	354	245	501	393	216	365	452	331	117	87	104	78	91	67
Sr	1170	813	718	474	450	727	804	471	626	425	352	545	321	301	209
Y	9.65	58.90	33.70	42.50	44.90	13.80	47.60	65.40	30.20	14.40	45.70	37.30	36.90	63.20	36.60
Zr	332	681	580	668	424	206	632	519	475	275	451	530	393	489	334

Nb	10.10	36.80	28.80	35.60	31.50	9.52	40.10	53.20	24.10	13.90	23.23	26.90	18.47	28.70	14.10
Ba	758	3280	2730	1600	1620	464	2240	1420	2520	1140	736	1420	631	550	238
La	9.91	136.00	133.00	126.00	93.50	19.20	180.00	104.00	120.00	61.90	66.73	122.00	54.83	56.70	21.50
Ce	16.60	255.00	234.00	242.00	163.00	36.30	309.00	181.00	213.00	111.00	124.77	220.00	105.23	105.00	49.30
Pr	1.91	29.40	25.10	29.10	19.20	4.27	33.40	20.70	23.70	11.40	14.13	23.30	11.65	13.10	6.00
Nd	7.66	98.10	84.10	100.00	67.20	16.00	108.00	70.20	80.30	38.40	50.53	77.70	41.90	49.20	24.70
Sm	1.81	16.50	13.20	16.20	13.10	3.36	18.20	14.40	12.80	6.26	10.11	13.30	8.56	10.60	6.42
Eu	1.96	2.62	2.53	2.16	1.42	1.21	2.81	1.60	1.94	1.13	2.19	2.10	2.14	2.35	2.13
Gd	1.74	13.14	9.90	11.74	10.77	2.96	14.00	13.73	9.86	4.11	9.42	10.38	7.95	11.01	6.87
Tb	0.26	1.96	1.32	1.63	1.61	0.44	1.90	2.25	1.29	0.58	1.37	1.46	1.18	1.61	1.04
Dy	1.46	10.10	6.14	7.71	8.00	2.41	8.95	11.90	5.67	2.89	7.75	7.35	6.70	9.42	6.49
Ho	0.30	2.06	1.16	1.45	1.46	0.44	1.57	2.14	1.02	0.52	1.54	1.34	1.35	1.91	1.38
Er	0.89	5.65	3.30	4.07	3.99	1.22	4.30	5.72	3.05	1.36	4.42	3.69	3.65	5.73	3.85
Tm	0.14	0.79	0.45	0.55	0.53	0.17	0.56	0.77	0.39	0.17	0.63	0.48	0.54	0.85	0.55
Yb	1.02	5.22	3.01	3.28	3.52	1.11	3.50	4.56	2.62	1.25	4.03	3.01	3.30	5.53	3.55
Lu	0.16	0.77	0.46	0.42	0.53	0.16	0.52	0.66	0.38	0.17	0.57	0.40	0.47	0.81	0.51
Hf	8.07	16.80	13.70	16.80	10.40	5.67	14.30	12.80	11.50	6.64	9.32	12.30	8.62	8.42	7.24
Ta	2.61	4.42	4.28	5.62	5.01	5.20	6.99	7.96	4.26	1.07	1.35	1.32	1.25	1.41	1.32
Pb	62.7	80.7	63.9	69.0	77.1	48.3	65.1	86.7	63.9	15.7	13.5	18.9	15.0	10.9	10.6
Th	2.13	61.30	44.30	77.90	69.30	5.61	57.00	48.40	45.20	17.40	16.70	32.10	15.22	10.70	7.31
U	0.97	6.05	3.97	4.21	5.56	1.39	6.59	9.72	6.88	1.63	2.11	3.12	2.30	1.41	1.81
Eu/Eu^*	3.33	0.53	0.65	0.46	0.35	1.15	0.52	0.34	0.51	0.64	0.72	0.53	0.86	0.66	0.98
Sr/Y	121.2	13.8	21.3	11.2	10.0	52.7	16.9	7.2	20.7	29.5	8.4	14.6	8.7	4.8	5.7
$(La/Yb)_N$	7.0	18.7	31.7	27.6	19.1	12.4	36.9	16.4	32.9	35.5	13.6	29.1	12.6	7.4	4.3

TABLE 2 CONTINUED

Sample No.	B70801-2	B70801-3	CY140	CY144	CY147	CY145	CL290	CL292	CL293	CL296
			Langmuri Intrusion from the Central Kunlun Belt							
SiO_2	53.91	54.21	72.38	71.81	71.16	71.02	69.67	70.84	70.63	67.92
TiO2	2.06	2.00	0.14	0.10	0.17	0.19	0.21	0.17	0.19	0.35
Al_2O_3	14.74	14.81	16.10	16.52	15.98	16.21	16.73	15.92	16.32	17.37
Fe_2O_3	11.56	11.27	0.92	1.22	1.57	1.82	2.02	1.88	1.82	2.52
MnO	0.18	0.17	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.04
MgO	3.73	3.69	0.38	0.41	0.81	0.82	0.96	0.82	0.92	0.93
CaO	6.36	6.14	1.95	3.60	2.18	2.93	3.49	2.77	3.06	3.21
Na_2O	3.89	3.98	5.69	5.23	5.98	4.98	5.02	5.07	4.95	4.72
K_2O	1.59	1.60	2.09	0.72	0.81	1.11	1.17	1.52	1.30	1.98
P_2O_5	0.41	0.42	0.03	0.05	0.05	0.04	0.07	0.06	0.06	0.05
LOI	0.88	1.06	0.53	0.44	0.77	0.72	0.79	0.76	0.70	1.39
Total	99.74	99.75	100.22	100.11	99.49	99.86	100.16	99.84	99.98	100.48
$Mg^{\#}$	53.3	52.1	24.5	28.7	37.6	42.9	40.0	39.6	44.6	39.5
Sc	28.60	29.30	2.92	2.05	3.19	3.46	3.51	3.78	3.71	4.92
V	206.0	206.0	10.9	6.5	14.8	14.2	20.3	17.2	16.8	21.3
Cr	46.6	50.4	14.5	20.2	52.0	33.8	33.6	27.0	22.6	26.4
Co	54.00	55.80	1.02	1.49	2.77	3.05	3.80	3.01	3.12	5.53
Ni	34.4	33.5	2.4	2.0	7.5	7.3	6.4	5.6	5.0	8.5
Ga	18.2	19.5	20.5	17.5	19.6	17.6	19.7	18.7	18.4	19.0
Rb	64	67	43	19	20	43	45	54	45	65
Sr	209	210	778	754	553	532	614	498	506	533
Y	35.80	37.60	6.43	3.99	6.14	6.56	5.34	6.59	5.25	2.39
Zr	315	333	82	83	96	81	107	89	87	112

Nb	14.00	14.50	3.19	1.13	2.54	3.16	1.73	3.27	2.02	2.70
Ba	233	240	268	201	148	162	164	212	172	339
La	20.70	21.80	9.66	15.69	8.10	10.99	6.56	4.63	8.26	18.04
Ce	46.60	49.10	21.83	30.31	18.39	23.55	13.05	9.31	17.53	35.36
Pr	5.76	5.89	2.79	3.57	2.32	2.89	1.57	1.14	2.23	3.94
Nd	23.40	24.60	11.43	13.58	9.72	11.54	6.35	4.71	8.90	14.33
Sm	5.98	6.41	2.72	2.33	2.27	2.55	1.46	1.35	1.97	2.07
Eu	2.13	2.21	0.68	1.21	0.59	0.71	0.64	0.53	0.60	1.00
Gd	6.81	6.67	1.93	1.60	1.87	1.93	1.12	1.30	1.51	1.14
Tb	1.02	1.07	0.25	0.19	0.24	0.26	0.16	0.22	0.20	0.11
Dy	6.25	6.51	1.22	0.84	1.26	1.38	0.91	1.33	1.04	0.45
Ho	1.38	1.34	0.22	0.14	0.20	0.22	0.18	0.23	0.18	0.08
Er	3.57	3.70	0.62	0.39	0.53	0.57	0.52	0.59	0.49	0.25
Tm	0.55	0.59	0.09	0.05	0.08	0.08	0.09	0.09	0.06	0.05
Yb	3.41	3.47	0.60	0.33	0.53	0.52	0.62	0.58	0.40	0.38
Lu	0.51	0.50	0.10	0.06	0.08	0.08	0.09	0.09	0.05	0.07
Hf	6.64	6.92	2.48	2.18	2.86	2.31	3.06	2.65	2.46	3.06
Ta	1.26	1.17	0.24	0.05	0.21	0.22	0.25	0.79	0.30	0.40
Pb	11.3	14.7	21.4	14.2	10.5	16.2	7.2	12.5	8.4	12.0
Th	6.72	6.85	2.85	4.24	2.61	4.04	1.23	1.59	1.96	4.03
U	1.88	1.89	1.16	0.64	0.85	0.96	0.36	0.67	0.49	0.48
Eu/Eu^*	1.01	1.02	0.87	1.82	0.85	0.94	1.46	1.21	1.02	1.81
Sr/Y	5.8	5.6	120.9	189.0	90.0	81.1	115.0	75.5	96.3	223.5
$(La/Yb)_N$	4.4	4.5	11.6	34.0	10.9	15.1	7.6	5.7	14.9	33.7

LOI = loss of ignition, Mg# = 100×Mg/(Mg+∑Fe) in atomic ratio. The La and Yb contents of chondrite used to calculate $(La/Yb)_N$ are from Sun and McDonough (1989).

References

Sun, S.S., and McDonough, W.F., 1989, Chemical and isotopic systematics of oceanic basalts: implications for mantle composition and processes, in Saunders, A.D., and Norry, M.J., eds., Magmatism in the Ocean Basins: Geological Society, London, Special Publication 42, p. 313–345, https://doi.org/10.1144/GSL.SP.1989.042.01.19.

Table DR8. Sr-Nd isotopic compositions of intrusions from the Xiangride-Kuhai, EKO

Sample No.	Rb(ppm)	Sr(ppm)	$^{87}Rb/^{86}Sr$	$^{87}Sr/^{86}Sr$	2σ	$(^{87}Sr/^{86}Sr)_i$	Sm(ppm)	Nd(ppm)	$^{147}Sm/^{144}Nd$	$^{143}Nd/^{144}Nd$	2σ	$\varepsilon_{Nd}(t)$	T_{DM}(Nd) (Ma)	T_{2DM}(Nd) (Ma)
Qurelong Monzodiorite from the South Kunlun Belt														
B1301-1	56	950	0.1709	0.707882	0.000006	0.706738	9.57	50.30	0.1150	0.512238	0.000003	-2.9	1406	1435
B1303-1	65	840	0.2229	0.708046	0.000005	0.706554	9.68	48.80	0.1199	0.512258	0.000003	-2.8	1447	1428
B1308-1	87	800	0.3132	0.708905	0.000006	0.706808	7.34	38.80	0.1144	0.512218	0.000003	-3.2	1427	1464
B1309-1	107	695	0.4455	0.709615	0.000005	0.706632	6.86	35.00	0.1185	0.512241	0.000003	-3.1	1453	1448
B1311-1	55	906	0.1750	0.708855	0.000005	0.707683	8.02	43.30	0.1120	0.512239	0.000003	-2.7	1363	1419
B1312-1	60	942	0.1837	0.707843	0.000006	0.706613	9.08	48.90	0.1122	0.512248	0.000006	-2.5	1353	1406
Kengdenongshe Intrusion from the Central Kunlun Belt														
B8139-2	144	128	3.2617	0.729190	0.000070	0.708467	3.55	23.20	0.0925	0.512109	0.000005	-4.4	1308	1536
B8142-1	145	112	3.7543	0.731080	0.000020	0.707228	3.40	23.40	0.0878	0.512099	0.000007	-4.3	1271	1531
B8142-2	178	413	1.2485	0.720570	0.000030	0.712638	6.40	43.50	0.0889	0.512075	0.000007	-4.8	1312	1574
B8155-1	266	221	2.7549	0.725150	0.000030	0.707648	7.32	37.80	0.1171	0.512191	0.000003	-4.2	1510	1520
Biotite monzogranite from the Walega Intrusive Complex, Central Kunlun Belt														
B1107-1	118	1170	0.2919	0.710373	0.000005	0.708544	1.81	7.66	0.1428	0.512215	0.000020	-5.2	2004	1600
B1108-1	354	813	1.2609	0.717002	0.000006	0.709099	16.50	98.10	0.1017	0.512145	0.000002	-4.3	1365	1522
B1114-1	501	474	3.0646	0.729641	0.000006	0.710433	16.20	100.00	0.0979	0.511967	0.000003	-7.5	1554	1787
B1115-1	393	450	2.5307	0.723629	0.000017	0.707768	13.10	67.20	0.1178	0.512093	0.000007	-6.2	1677	1679
B1118-1	365	804	1.3147	0.716984	0.000005	0.708744	18.20	108.00	0.1019	0.512108	0.000004	-5.0	1419	1583
Quartz diorite from the Walega Intrusive Complex, Central Kunlun Belt														
B60003-2	104	545	0.5524	0.712282	0.000007	0.708899	13.30	77.70	0.1035	0.512147	0.000003	-4.5	1385	1529
B70002-2-1	91	301	0.8779	0.711823	0.000007	0.706446	10.60	49.20	0.1302	0.512538	0.000008	1.7	1117	1030
B70801-1	67	209	0.9264	0.711104	0.000004	0.705430	6.42	24.70	0.1571	0.512533	0.000011	0.1	1659	1158
B70801-2	64	209	0.8835	0.710959	0.000008	0.705548	5.98	23.40	0.1545	0.512511	0.000003	-0.2	1641	1180
B70801-3	67	210	0.9234	0.711073	0.000010	0.705418	6.41	24.60	0.1575	0.512521	0.000006	-0.1	1702	1178

Langmuri Intrusion from the Central Kunlun Belt														
CY140	43	778	0.1605	0.706692	0.000005	0.705760	2.72	11.43	0.1436	0.512544	0.000003	0.9	1317	1074
CY145	43	532	0.2317	0.708975	0.000008	0.707629	2.55	11.54	0.1335	0.512310	0.000007	-3.1	1594	1402
CY147	20	553	0.1053	0.706027	0.000006	0.705415	2.27	9.72	0.1409	0.512442	0.000004	-0.9	1479	1224
CL290	45	614	0.2101	0.706470	0.000004	0.705249	1.46	6.35	0.1391	0.512452	0.000002	-0.6	1424	1201
CL293	45	506	0.2551	0.706867	0.000005	0.705385	1.97	8.90	0.1340	0.512458	0.000004	-0.2	1322	1170
CL296	65	533	0.3530	0.710368	0.000009	0.708317	2.07	14.33	0.0873	0.512078	0.000006	-5.2	1292	1574

$(^{87}Sr/^{86}Sr)_i$ and $\varepsilon_{Nd}(t)$ values of intrusions are calculated based on their ages and present-day $(^{147}Sm/^{144}Nd)_{CHUR} = 0.1967$ and $(^{143}Nd/^{144}Nd)_{CHUR} = 0.512638$. T_{2DM} values are calculated based on present-day $(^{147}Sm/^{144}Nd)_{DM} = 0.2137$ and $(^{143}Nd/^{144}Nd)_{DM} = 0.51315$. $\lambda_{Rb} = 1.42\times10^{-11}$ year^{-1} (Steiger and Jäger, 1977), $\lambda_{Sm} = 6.54\times10^{-12}$ year^{-1} (Lugmair and Marti, 1978).

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Table S9. Hf isotopic compositions of intrusions from the Xiangride-Kuhai, EKO

Spot No.	Age (Ma)	$^{176}Yb/^{177}Hf$	1σ	$^{176}Lu/^{177}Hf$	1σ	$^{176}Hf/^{177}Hf$	1σ	$\varepsilon_{Hf}(0)$	$\varepsilon_{Hf}(t)$	$T_{DM}(Hf)$	$T_{2DM}(Hf)$	$f_{Lu/Hf}$
Qurelong Monzodiorite from the South Kunlun Belt (B1301-1)												
B1301-1-1	470	0.017924	0.000076	0.000645	0.000004	0.282500	0.000020	-9.6	0.5	1053	1291	-0.98
B1301-1-2	470	0.015738	0.000396	0.000550	0.000011	0.282521	0.000023	-8.9	1.3	1022	1249	-0.98
B1301-1-3	470	0.016401	0.000048	0.000582	0.000002	0.282498	0.000020	-9.7	0.5	1055	1294	-0.98
B1301-1-4	470	0.031909	0.000139	0.001126	0.000005	0.282535	0.000021	-8.4	1.6	1018	1232	-0.98
B1301-1-5	470	0.022144	0.001052	0.000758	0.000026	0.282512	0.000023	-9.2	0.9	1040	1270	-0.98
B1301-1-6	470	0.016443	0.000248	0.000568	0.000005	0.282502	0.000023	-9.5	0.6	1049	1287	-0.98
B1301-1-7	470	0.019592	0.000035	0.000628	0.000004	0.282491	0.000028	-9.9	0.2	1065	1309	-0.98
B1301-1-8	470	0.016275	0.000450	0.000534	0.000012	0.282524	0.000022	-8.8	1.4	1017	1243	-0.98
B1301-1-9	470	0.014655	0.000298	0.000503	0.000006	0.282514	0.000020	-9.1	1.1	1030	1261	-0.98
B1301-1-10	470	0.024948	0.000249	0.000890	0.000013	0.282519	0.000019	-8.9	1.1	1033	1258	-0.98
B1301-1-11	470	0.033417	0.000679	0.001089	0.000011	0.282516	0.000026	-9.0	1.0	1043	1268	-0.98
B1301-1-12	470	0.020823	0.000342	0.000732	0.000010	0.282513	0.000022	-9.2	1.0	1038	1267	-0.98
B1301-1-13	470	0.033687	0.000935	0.001041	0.000021	0.282517	0.000024	-9.0	1.0	1041	1266	-0.98
B1301-1-14	470	0.022273	0.000475	0.000732	0.000009	0.282523	0.000022	-8.8	1.3	1024	1248	-0.98
B1301-1-15	470	0.012183	0.000069	0.000439	0.000004	0.282503	0.000020	-9.5	0.7	1043	1282	-0.98
B1301-1-16	470	0.020929	0.000109	0.000747	0.000007	0.282504	0.000019	-9.5	0.6	1051	1286	-0.98
B1301-1-17	470	0.020888	0.000326	0.000702	0.000009	0.282511	0.000023	-9.2	0.9	1040	1271	-0.98
B1301-1-18	470	0.022268	0.000397	0.000740	0.000010	0.282512	0.000021	-9.2	0.9	1040	1270	-0.98
B1301-1-19	470	0.021819	0.000094	0.000762	0.000006	0.282535	0.000023	-8.4	1.7	1008	1225	-0.98
Kengdenongshe Intrusion from the Central Kunlun Belt (B8142-3)												
B8142-3-1	446	0.033441	0.000736	0.001398	0.000033	0.282436	0.000028	-11.9	-2.5	1165	1438	-0.96
B8142-3-2	446	0.044004	0.002122	0.001915	0.000080	0.282549	0.000038	-7.9	1.4	1020	1227	-0.94
B8142-3-3	446	0.038607	0.000744	0.001623	0.000038	0.282448	0.000022	-11.5	-2.1	1156	1420	-0.95
B8142-3-4	446	0.015391	0.000278	0.000536	0.000014	0.282496	0.000023	-9.8	-0.1	1056	1307	-0.98

B8142-3-5	446	0.033203	0.001106	0.001571	0.000036	0.282457	0.000033	-11.1	-1.8	1141	1401	-0.95
B8142-3-6	446	0.040909	0.000611	0.001763	0.000043	0.282487	0.000036	-10.1	-0.8	1104	1345	-0.95
B8142-3-7	446	0.035986	0.001018	0.001570	0.000061	0.282426	0.000026	-12.2	-2.9	1186	1462	-0.95
B8142-3-8	446	0.020942	0.000626	0.000909	0.000032	0.282355	0.000022	-14.7	-5.2	1263	1588	-0.97
B8142-3-9	446	0.050221	0.000651	0.001816	0.000019	0.282370	0.000022	-14.2	-5.0	1274	1575	-0.95
B8142-3-10	446	0.037436	0.000859	0.001623	0.000028	0.282463	0.000036	-10.9	-1.6	1134	1389	-0.95
B8142-3-11	446	0.024265	0.000578	0.001245	0.000034	0.282503	0.000019	-9.5	-0.1	1066	1305	-0.96
B8142-3-12	446	0.046704	0.001539	0.002131	0.000067	0.282492	0.000025	-9.9	-0.7	1108	1341	-0.94
B8142-3-13	446	0.049607	0.001513	0.002078	0.000057	0.282529	0.000033	-8.6	0.6	1053	1269	-0.94
B8142-3-14	446	0.003892	0.000218	0.000141	0.000009	0.282377	0.000025	-14.0	-4.2	1208	1533	-1.00
B8142-3-15	446	0.029865	0.000520	0.001252	0.000026	0.282508	0.000017	-9.3	0.1	1060	1296	-0.96
B8142-3-16	446	0.030867	0.000874	0.001369	0.000039	0.282482	0.000024	-10.3	-0.9	1100	1349	-0.96
B8142-3-18	446	0.031434	0.000514	0.001410	0.000028	0.282429	0.000023	-12.1	-2.7	1175	1452	-0.96
B8142-3-19	446	0.039003	0.000912	0.001630	0.000049	0.282480	0.000022	-10.3	-1.0	1110	1356	-0.95
B8142-3-20	446	0.045385	0.000804	0.001827	0.000037	0.282434	0.000022	-12.0	-2.7	1182	1451	-0.94
Biotite monzogranite from the Walega Intrusive Complex, Central Kunlun Belt (B1107)												
B1107-1	440	0.030578	0.000487	0.001124	0.000017	0.282776	0.000023	0.1	9.5	677	769	-0.97
B1107-2	440	0.019701	0.000393	0.000706	0.000014	0.282653	0.000017	-4.2	5.3	841	1004	-0.98
B1107-3	440	0.021153	0.000580	0.000784	0.000020	0.282299	0.000030	-16.7	-7.3	1337	1699	-0.98
B1107-4	440	0.034769	0.000569	0.001261	0.000018	0.282379	0.000020	-13.9	-4.6	1242	1551	-0.96
B1107-5	440	0.023390	0.000457	0.000914	0.000020	0.282427	0.000019	-12.2	-2.8	1164	1452	-0.97
B1107-6	440	0.012269	0.000249	0.000439	0.000010	0.282318	0.000015	-16.0	-6.5	1298	1655	-0.99
B1107-7	440	0.018226	0.000281	0.000723	0.000008	0.282751	0.000021	-0.7	8.7	705	812	-0.98
B1107-8	440	0.020747	0.000185	0.000772	0.000008	0.282454	0.000017	-11.3	-1.8	1122	1397	-0.98
B1107-9	440	0.025393	0.000473	0.000996	0.000027	0.282421	0.000020	-12.4	-3.0	1174	1463	-0.97
B1107-10	440	0.024146	0.000337	0.000963	0.000011	0.282686	0.000033	-3.0	6.4	801	944	-0.97
B1107-11	440	0.016525	0.000452	0.000640	0.000021	0.282655	0.000019	-4.1	5.4	838	1000	-0.98
B1107-12	440	0.030978	0.000913	0.001138	0.000037	0.282694	0.000018	-2.8	6.6	794	931	-0.97
B1107-13	440	0.028121	0.000871	0.001059	0.000030	0.282334	0.000026	-15.5	-6.1	1299	1636	-0.97

B1107-14	440	0.031351	0.000132	0.001219	0.000006	0.282507	0.000015	-9.4	0.0	1060	1299	-0.96
B1107-15	440	0.036795	0.000748	0.001373	0.000028	0.282716	0.000032	-2.0	7.3	767	891	-0.96
B1107-16	440	0.028398	0.000824	0.001068	0.000032	0.282315	0.000019	-16.2	-6.8	1325	1672	-0.97
B1107-17	440	0.025159	0.000497	0.000949	0.000019	0.282524	0.000021	-8.8	0.6	1028	1262	-0.97
B1107-18	440	0.004382	0.000430	0.000160	0.000016	0.282417	0.000016	-12.6	-2.9	1155	1459	-1.00
B1107-19	440	0.009521	0.000082	0.000425	0.000004	0.282563	0.000016	-7.4	2.2	961	1178	-0.99
B1107-20	440	0.026736	0.000243	0.001028	0.000010	0.282735	0.000020	-1.3	8.1	733	849	-0.97
Quartz diorite from the Walega Intrusive Complex, Central Kunlun Belt (B70002-2)												
B70002-2-1	430	0.114144	0.004007	0.003704	0.000110	0.282798	0.000030	0.9	9.3	694	771	-0.89
B70002-2-2	430	0.106707	0.006038	0.003569	0.000177	0.282724	0.000033	-1.7	6.8	802	914	-0.89
B70002-2-3	430	0.118166	0.003441	0.003736	0.000095	0.282785	0.000028	0.4	8.9	714	798	-0.89
B70002-2-4	430	0.076263	0.008125	0.002592	0.000235	0.282805	0.000031	1.2	9.9	661	739	-0.92
B70002-2-5	430	0.130218	0.003332	0.004135	0.000106	0.282806	0.000031	1.2	9.5	690	762	-0.88
B70002-2-6	430	0.109194	0.002276	0.003441	0.000054	0.282753	0.000029	-0.7	7.8	757	856	-0.90
B70002-2-7	430	0.044811	0.003276	0.001539	0.000112	0.282727	0.000022	-1.6	7.5	754	876	-0.95
B70002-2-8	430	0.121583	0.004908	0.004252	0.000182	0.282830	0.000034	2.1	10.3	654	716	-0.87
B70002-2-9	430	0.138229	0.002464	0.004866	0.000058	0.282793	0.000040	0.7	8.8	725	799	-0.85
B70002-2-10	430	0.040336	0.004765	0.001455	0.000167	0.282713	0.000024	-2.1	7.0	773	902	-0.96
B70002-2-11	430	0.067378	0.004887	0.002253	0.000165	0.282775	0.000027	0.1	8.9	699	793	-0.93
B70002-2-12	430	0.069558	0.002934	0.002433	0.000103	0.282791	0.000028	0.7	9.5	679	764	-0.93
B70002-2-13	430	0.120962	0.005451	0.004128	0.000207	0.282789	0.000041	0.6	8.9	715	794	-0.88
B70002-2-14	430	0.092513	0.009301	0.003039	0.000314	0.282760	0.000041	-0.4	8.2	737	835	-0.91
B70002-2-15	430	0.076953	0.001576	0.002582	0.000073	0.282723	0.000033	-1.7	7.0	783	901	-0.92
B70002-2-16	430	0.083661	0.005931	0.002676	0.000156	0.282817	0.000032	1.6	10.3	645	716	-0.92
B70002-2-17	430	0.089260	0.007887	0.003044	0.000276	0.282767	0.000040	-0.2	8.4	727	822	-0.91
B70002-2-18	430	0.068896	0.004009	0.002344	0.000135	0.282736	0.000031	-1.3	7.5	758	871	-0.93
B70002-2-19	430	0.092713	0.004700	0.003099	0.000151	0.282772	0.000032	0.0	8.6	721	813	-0.91
Langmuri Intrusion from the Central Kunlun Belt (CL290)												

CL290-01	408	0.019224	0.000575	0.000549	0.000015	0.282539	0.000009	-8.2	0.6	997	1239	-0.98
CL290-02	408	0.031558	0.000386	0.000908	0.000013	0.282813	0.000007	1.4	10.2	621	705	-0.97
CL290-03	408	0.042254	0.000121	0.001201	0.000005	0.282820	0.000008	1.7	10.4	616	696	-0.96
CL290-04	408	0.036525	0.000441	0.001044	0.000008	0.282807	0.000008	1.2	9.9	631	719	-0.97
CL290-05	408	0.007691	0.000695	0.000225	0.000019	0.282679	0.000011	-3.3	5.6	795	959	-0.99
CL290-06	408	0.035057	0.000752	0.001013	0.000022	0.282798	0.000008	0.9	9.6	644	737	-0.97
CL290-07	408	0.042371	0.000903	0.001198	0.000021	0.282806	0.000010	1.2	9.9	635	724	-0.96
CL290-08	408	0.045745	0.000609	0.001309	0.000020	0.282797	0.000008	0.9	9.5	650	743	-0.96
CL290-09	408	0.041352	0.000329	0.001169	0.000008	0.282795	0.000008	0.8	9.5	651	745	-0.96
CL290-10	408	0.036829	0.000547	0.001072	0.000014	0.282814	0.000008	1.5	10.2	622	706	-0.97
CL290-11	408	0.048608	0.000459	0.001399	0.000013	0.282842	0.000010	2.5	11.1	587	656	-0.96
CL290-12	408	0.036520	0.000318	0.001073	0.000008	0.282832	0.000017	2.1	10.8	596	670	-0.97
CL290-13	408	0.035344	0.001180	0.001020	0.000041	0.282809	0.000010	1.3	10.0	628	715	-0.97
CL290-14	408	0.025804	0.001017	0.000757	0.000033	0.282543	0.000015	-8.1	0.7	997	1234	-0.98
CL290-15	408	0.042128	0.000169	0.001227	0.000004	0.282817	0.000009	1.6	10.2	620	702	-0.96
CL290-16	408	0.030443	0.000794	0.000888	0.000018	0.282818	0.000009	1.6	10.4	613	695	-0.97
CL290-17	408	0.037770	0.000154	0.001074	0.000003	0.282799	0.000008	1.0	9.7	643	736	-0.97
CL290-18	408	0.043846	0.000457	0.001255	0.000010	0.282825	0.000009	1.9	10.5	609	687	-0.96
CL290-19	408	0.043507	0.000372	0.001266	0.000006	0.282831	0.000009	2.1	10.7	601	675	-0.96
CL290-20	408	0.045028	0.000316	0.001297	0.000007	0.282805	0.000009	1.2	9.8	639	727	-0.96
CL290-21	408	0.032291	0.001480	0.000927	0.000044	0.282613	0.000013	-5.6	3.1	903	1100	-0.97
CL290-22	408	0.036031	0.000351	0.001031	0.000016	0.282800	0.000009	1.0	9.7	641	733	-0.97
CL290-23	408	0.043583	0.000290	0.001227	0.000010	0.282800	0.000008	1.0	9.6	645	736	-0.96
CL290-24	408	0.044460	0.000356	0.001273	0.000009	0.282823	0.000011	1.8	10.4	613	691	-0.96
CL290-25	408	0.049682	0.000707	0.001356	0.000014	0.282821	0.000010	1.7	10.4	617	696	-0.96

The parameter used in our calculations: $(^{176}Hf/^{177}Hf)_{CHUR}$ = 0.282772, $(^{176}Lu/^{177}Hf)_{CHUR}$ = 0.0332 (Blichert-Toft and Albarède, 1997); $(^{176}Hf/^{177}Hf)_{DM}$ = 0.28325, $(^{176}Lu/^{177}Hf)_{DM}$ = 0.0384 (Griffin et al., 2000); $\lambda(^{176}Lu) = 1.867\times10^{-11}\ a^{-1}$ (Söderlund et al., 2004).

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