

Supplementary Table 5 Zircon trace element analyses for the representative plutons (ppm).

Spot	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	Y	Nb	Pb	Th	U
<i>Qingduxiang granodiorite</i>																					
QDX-0-1	0.2	40.9	1.4	22.2	38.9	13.6	214.2	69.5	793.7	292.1	1231.7	251.8	2352.8	455.7	25515.4	1.9	7950.3	6.4	11.2	903.5	866.1
QDX-0-2	11	85.8	3.6	19	12.7	1.1	63.7	23.3	287.1	116.2	530.4	113.7	1091.5	214.7	31309.8	4.8	3299	11.2	12.7	758.3	1148.3
QDX-0-3	16.1	97.1	6.1	30.7	15.6	1.8	76.1	25.6	320.3	125.8	575.6	127.4	1231.9	246.3	28889.4	5.1	3616.6	10.8	13.7	699.4	1057.1
QDX-0-4	0.1	35.8	0.5	6.5	14.2	5.1	92.5	32.9	426.1	178	830.6	174.6	1728.3	344.6	22281.8	2.5	5118.7	7.5	12.2	813.2	891
QDX-0-5	0.1	57.5	0.2	4.2	12.2	1.8	65.8	23.6	289.4	116	528.9	117.8	1148.2	230	32099.8	4.5	3327.5	11.4	12.3	725.4	1048.7
QDX-0-6	41	143.5	12.8	67.3	24.7	2.3	80.1	27.7	312.3	124.4	559.5	116.2	1110.4	216.4	29229.6	3.8	3475.7	11.2	13.6	834.3	1142.8
QDX-0-7	0.1	49.5	0.1	4.6	9.5	2	60.7	25.3	297.6	121.6	569	121.7	1177	235.5	33603.6	4.7	3454.9	10.3	9.1	540.6	922.2
QDX-0-8	0	83	0.3	6.1	15.5	1.8	96.7	35.5	424.8	162.9	712.6	146.7	1379.2	266	30626.3	6.2	4483.7	15	25.7	1987	1850.9
QDX-0-9	0	56.2	0.1	1.6	7.4	1	43.5	16.3	208.5	86	422.9	95.2	990	202.7	30838	4.4	2610	9.9	13.4	674.9	1102.6
QDX-0-10	13	68.1	4.5	38	42.2	7.5	209.7	66.9	763.5	272.1	1152.6	226.2	2042.2	382.5	27348.4	2.5	7493.2	6.6	14	1071	1124.6
QDX-0-11	5.6	63.6	1.7	8.5	9.4	0.4	50.1	19.7	244	100	464.8	103.4	1007.8	204.7	31514.4	4.8	2881	11	11.1	610.6	989.9
QDX-0-12	12.2	81.7	3.2	18.3	11.1	1.5	52.8	20.2	246	98.3	461.3	104.3	996.2	195.9	30150.3	5.1	2858.6	9.1	13	697.9	1051.6
QDX-0-13	31.6	136.7	9.6	46.5	21.7	1.4	72.3	24	298.5	118.3	541.4	118.3	1120.6	219.2	30246	4.5	3372.7	11.3	15.2	850.7	1227.8
QDX-0-14	23	116.5	8.3	35.9	25.1	3.2	122.4	38.1	451.6	173.1	742.4	153.5	1402.1	267.3	29518.5	4.2	4760.5	12.2	22.3	1665.1	1557.8
QDX-0-15	1	53.9	0.5	4.4	10.1	1.9	55.1	21.9	263.8	111.5	521.9	118.3	1128.3	228.5	29876	3.9	3170.9	9.5	12	719.7	1034
QDX-0-16	7.2	56.7	1.2	11.5	4.2	0.5	25.8	12	162.3	65.7	321.7	76.3	775.7	164.2	33495.5	4.6	1987.3	7.5	15.8	515.9	863.3
QDX-0-17	45.2	165.9	13.3	63.4	17.5	1.4	53.8	17.4	233.2	92.9	431.3	97.9	949	193.9	29894.3	3.9	2697.6	10.8	13	675.8	1032.9
QDX-0-18	3.4	83	1.8	18.3	37.1	5.8	200.9	68.5	808.5	293.8	1221.8	245.7	2218.9	419.3	26657.8	4.5	8127.9	13	23.9	1894.7	1821.8
QDX-0-19	0	18	0.2	3.5	6.5	2.7	29.1	9.2	103.3	34.3	152.9	32.5	306.5	62.5	25198.8	1.4	1032.8	2.8	25.7	309	526.5
QDX-0-20	21.1	112.7	8.6	47.4	16.2	1.2	64.1	21.4	250	100.1	465.3	95	925.2	184.5	30219.7	4	2847.5	10	11.9	659.8	1014.3
QDX-0-21	0	34.5	0.6	9.7	14.6	4.6	58.7	16.5	187.6	68.6	294.6	63.1	606	123.4	25035.9	1.9	2015.1	4.5	65	889.8	1251.7
QDX-0-22	0.1	37.5	1.1	15	34.8	10.7	169	54.8	598.8	217.6	950.7	199.2	1877.4	370.6	24007.6	1.1	6206.9	5.7	8.8	644	653.2
QDX-0-23	51.6	152.3	15.2	77.8	35.9	6.7	130.1	40	459.7	170.2	732.6	151.1	1361.3	270.1	24992.8	2.2	4650.4	6.7	17.7	758.4	750.3
QDX-0-24	0.3	110.3	2.2	30.4	41.9	8.1	190.5	52.7	598.5	217.3	922.9	187.6	1706.1	342.6	18676	1.5	5952.2	7.6	8.2	603.1	456
QDX-0-25	0.1	26.5	0.9	13.9	23.2	6.2	131.7	41.4	502.2	188	823.4	180.5	1673.9	339.1	26630.6	1.8	5465	5	8	550.4	705
QDX-0-26	5.3	66.5	1.5	7.1	8.6	0.8	47.1	18.1	231.1	94.9	452.5	105.7	1039.6	209.8	30631.2	4.6	2845	10.6	13.6	695	1056
QDX-0-27	1.9	58.2	1	6.4	11.3	2.2	74.7	28.2	360.6	146.1	691.9	149.6	1449.1	287.1	28696.5	4.4	4320.9	12.1	14.3	922	1210.3

Longge'er gabbro

LGR-0-1	0	17.9	0.1	1	2.4	0.3	17.9	6.5	79.6	33	160.2	35.7	345.9	71.2	11270.6	1.3	1008.5	3	3.9	223.1	344.9
LGR-0-2	0	20.8	0.2	1.8	5.7	0.5	38.5	14.5	189.1	80.2	401.3	92.4	946.6	197.9	12925.2	2.4	2530.4	2.4	19.6	724.9	899
LGR-0-3	0	12.9	0.1	0.6	2.3	0.4	14.9	5.7	79.8	33.3	166.4	38.6	386.5	82.8	11298.4	1	1043.9	1.6	4.9	158.7	208.6
LGR-0-4	8.6	46.2	3.6	17.2	8	0.7	41.5	11.2	135.2	52.2	222.7	45.5	422.1	81.1	9460.4	1.1	1487.4	2.7	4.8	360	373
LGR-0-5	7.8	31.1	2.2	10.6	6.9	1	32	10.9	135	53.4	242.1	50.1	472.5	95.4	9877.6	1.1	1529.2	2.6	5.6	219	214.2
LGR-0-6	8.9	44.2	2.2	11.2	7.3	1.2	37.7	12	152.4	62.6	286.5	61.7	595.8	120.4	8919.8	1.2	1885.4	4.2	10.3	476.2	373.4
LGR-0-7	0.1	9.1	0.1	0.7	1.8	0.3	15.9	6.7	94.2	39.2	200.4	46	477.3	103	10964.2	1.2	1242.2	2.3	8.2	204.8	357.9
LGR-0-8	0.5	16.2	0.2	1.2	1.6	0.2	10.2	4.3	57.2	23.8	118.5	26.5	278.8	57.6	11581.2	1.2	754.4	2.8	3	155.2	270.4
LGR-0-9	3.1	19.6	1	4.7	2.9	0.4	16.7	5.9	79.6	33.3	165.4	37.5	376.8	80.4	10224	1	1023.4	1.9	5	163.3	204.1
LGR-0-10	1.1	16.9	0.6	2.9	3.4	0.7	24.9	9.8	132.3	51	237.7	51.1	487.2	99	10681.9	1.5	1517	2.3	6.3	247	261.5
LGR-0-11	1.3	21.8	0.4	2.6	2.3	0.2	14.6	5.7	69.5	29.4	151.5	35.2	349.9	74.6	12314.8	1.9	938.4	3.9	5.5	295.7	487.4
LGR-0-12	0.3	22.9	0.1	1.9	4.4	0.4	28.3	10.1	123.8	49.2	228.2	47.7	458	91.5	10968.9	1.2	1457.6	2.4	7.9	416.5	285.8
LGR-0-13	16.7	79.5	5.2	24.3	11.8	1	53.4	17.5	217.8	84.1	379.7	81.7	731.2	145	10875.2	1.6	2481.6	4.2	12.7	763.1	446.8
LGR-0-14	0.2	14.1	0.1	1.3	2.6	0.5	18.2	5.9	81.6	32.8	153.5	33.2	325.8	67.9	11810.3	1.3	971.5	2.5	3.4	168.8	288.9