Table DR1: Apatite fission-track and vitrinite-reflectance analytical results for Qilian Shan, northwestern China

Sample *Field number*	Depositional age (Ma)	Location Name *Latitude Longitude*	Elevation (m)	VR paleotemp. (•C)	Apatite fission track age (Ma)	Number of grains counted	P(χ^2) %	Mean track length (µm) (number of tracks)	Std. dev. (µm)
Oligocene–Pliocene samples									
GC740-2 *98/06*	5-2	Niygetao *39•46'27" 97•30'16"*	2530	-	171.5±13.9	20	<5	13.21±0.17 (103)	1.74
GC740-6 *98/20*	7-3	Niygetao *39•47'25" 97•30'53"*	2450	-	175.5±9.1	20	<5	12.89±0.23 (45)	1.52
GC740-7 *98/35*	5-2	Hong Shan *39•59'38" 97•27'25"*	1700	-	147.6±11.1	20	<5	12.96±0.15 (118)	1.61
GC740-13 *98/114*	35-5	Baiyanghe *40•00'06" 97•43'29"*	1630	-	143.3±19.8	3	<5	13.41±0.36 (15)	1.40
GC740-9 *98/49*	23-5	Shiyuhe *39•47'10" 97•32'38"*	2350	-	154.7±8.1	27	<5	12.86±0.14 (108)	1.45
GC740-10 *98/75*	23-5	Changma *39•30'37" 97•41'30"*	3150	-	170.3±15.4	23	<5	13.25±0.15 (104)	1.52
Jurassic–Cretaceous samples									
GC740-5 *98/106*	145-65	Baiyanghe *39•58'35" 97•42'52"*	1670	~105	166.2±11.2	25	<5	13.15±0.14 (119)	1.49
GC740-11 *98/79*	145-65	SE Yushugou Shan 39•49'08" 98•10'31"	1590	~120	150.8±10.3	26	<5	12.68±0.21 (78)	1.85
GC740-15 *97/Y4*	145-65	Hanxi Valley *39•49'30" 97•13'50"*	2500		72.9±5.1	22	8	11.19±0.51 (18)	2.14
GC740-8 *98/47*	208-145	Hong Shan *40•00'01" 97•26'01"*	1700	~125	169.0±8.1	28	<5	12.94±0.18 (114)	1.96
GC740-1 *98/45*	208-145	Hong Shan *40•13'24" 97•27"08"*	1710	~105	171.5±13.9	20	<5	12.47±0.18 (103)	1.88
Cambrian–Silurian samples									
GC740-12 *98/80*	510-439	SE Yushugou Shan *39•46'16" 98•07'17"*	1610	-	226.2±13.5	29	<5	13.21±0.17 (103)	1.74
GC740-3 *98/92*	570-439	Changma Fan *39•59'07" 96•48'22"*	1960	-	100.2±8.6	25	<5	11.79±0.19 (100)	1.94
GC740-4 *97/Y5*	439-408	Hanxi Valley *39•47'39" 97•11'22"*	3000	-	19.8±2.3	20	57	12.50±0.94 (9)	2.81
GC740-14 *97/Y3*	570-510	Changma Valley *39•22'01" 97•38'55"*	4020	-	115.0±23.6	11	<5	12.75±0.30 (18)	0.73

Apatite fission-track ages calculated by using ξ=348.6 for dosimeter glass SRM612 or by using ξ= 382.4 for dosimeter glass CN5. Central fission-track age used where$P(\chi 2)$<5%. All errors are ±1σ.
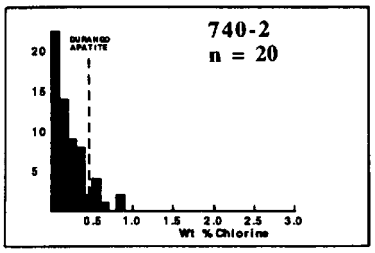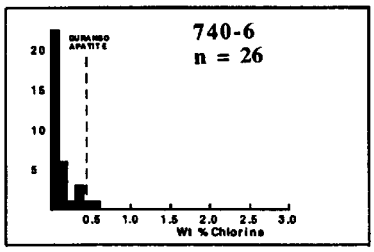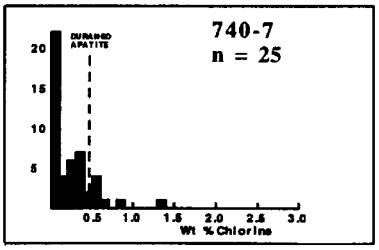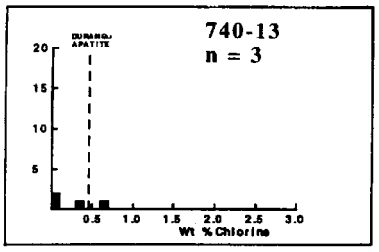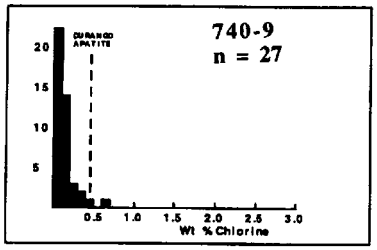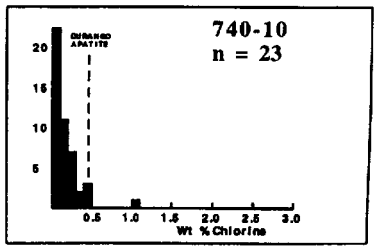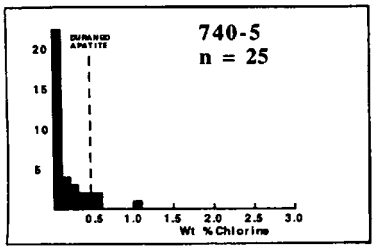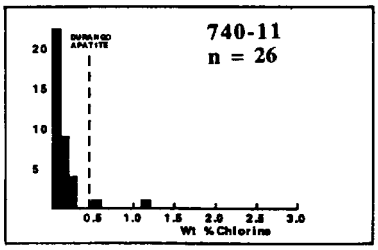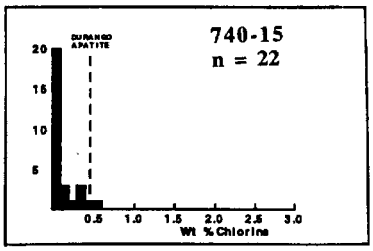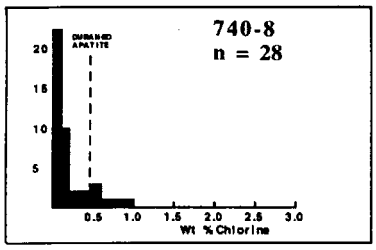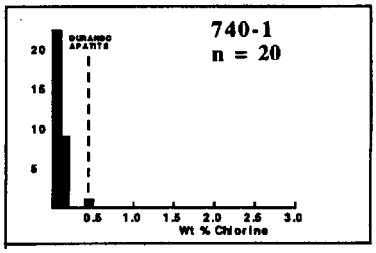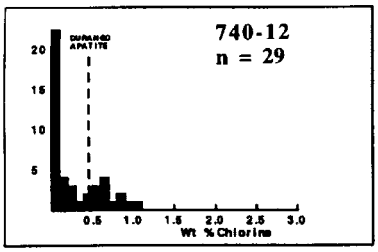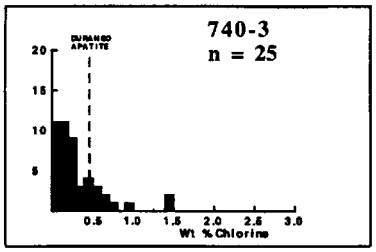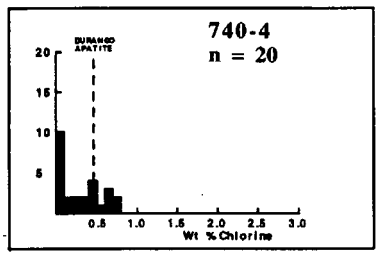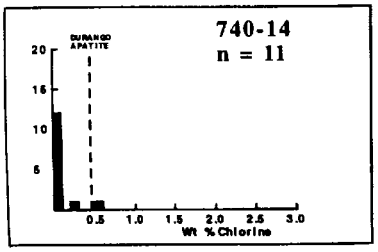
Table DR1 : Chlorine compositions of single apatite grains for samples from the Qilian Shan, northwestern China