

SUPPLEMENTAL TABLE 2. U-SERIES RESULTS FROM THE GRAND JUNCTION AREA

Sample Number	Height (m)‡	U (ppm)	Th (ppm)	$(^{230}\text{Th}/^{232}\text{Th})$	2 $\sigma$ error	$(^{230}\text{Th}/^{238}\text{U})$	2 $\sigma$ error	$\delta^{234}\text{U}_m$	2 $\sigma$	$\delta^{234}\text{U}_i$	$\pm 2\sigma$ error	Corrected age (ka)	$\pm 2\sigma$ error	% correction	Min. $^{234}\text{U}$ model age (ka) $\delta^{234}\text{U}_i=1000$	Max. $^{234}\text{U}$ model age (ka) $\delta^{234}\text{U}_i=4000$
CR112809-2B	146	1.40	0.06	81.90 ± 0.36		1.20 ± 0.00		130.6 ± 0.7							723	1213
CR-41012-1	110	15.47	0.03	2482.43 ± 13.19		1.57 ± 0.00		578.9 ± 9.4		1187.1 + 28.2	- 27.2	254.7 + 6.1	- 5.8	0.006		
CR-41012-2	101	1.61	0.01	630.76 ± 5.69		1.33 ± 0.01		239.6 ± 2.0		1233.2 + 538.5	- 214.8	581.2 + 128.5	- 67.8	0.008		
CR100-6413-1E	100	0.85	0.06	60.31 ± 0.21		1.48 ± 0.00		544.7 ± 1.5		1031.2 + 7.0	- 6.9	226.4 + 2.2	- 2.1	0.258		
QT80-8812-1AA	80	33.45	0.01	18544.69 ± 322.65		1.62 ± 0.01		945.3 ± 3.1		1465.5 + 7.0	- 6.9	155.5 + 1.2	- 1.2	0.001		

Corrected ages use a calculated initial  $^{230}\text{Th}/^{232}\text{Th}$  atomic ratio of 4.4 ppm ± 50%. Thousand years before present = ka.

All errors are absolute 2 $\sigma$ . New half-lives for  $^{230}\text{Th}$  and  $^{234}\text{U}$  are from Cheng et al. 2013.

‡ Heights are measured relative to river level using 1:24,000 quadrangle topographic maps