Auxiliary Material Table B1. Apatite and Zircon (U-Th)/He Replicate Analysis

Sample	Age (Ma)	Error (2σ)	U (ppm)	Th (ppm)	Sm (ppm)	Th/U	He (nmol/g)	mass (µg)	Ft	ESR (µm)	Std Dev
					Apatite						
82309PK1-1	3.1	0.2	15.6	42.8	94.6	2.7	0.3	1.0	0.6	36.0	
82309PK1-2	1.1	0.1	17.0	28.8	112.2	1.7	0.1	2.9	0.7	49.3	
82309PK1-3	2.0	0.1	52.3	23.1	140.5	0.4	0.4	1.4	0.6	39.0	
82309PK1	**2.1**	**0.1**	**28.3**	**31.5**	**115.8**	**1.6**	**0.3**	**1.8**	**0.6**	**41.4**	*1.0*
82309PK5-1*	21.2	1.3	0.5	8.2	46.5	17.9	0.2	3.5	0.7	53.7	
82309PK5-2	6.8	0.4	11.2	125.1	99.4	11.2	1.2	10.2	0.8	77.7	
82309PK5-3	2.2	0.1	9.0	60.6	126.8	6.7	0.2	3.7	0.7	54.4	
82309PK5-4	2.2	0.1	38.6	145.4	143.0	3.8	0.5	1.6	0.6	40.3	
82309PK5	**3.7**	**0.2**	**19.6**	**110.4**	**123.1**	**7.2**	**0.6**	**5.2**	**0.7**	**57.4**	*2.7*
82709PK1-1	2.2	0.1	85.3	9.3	13.8	0.1	0.7	1.9	0.7	41.4	
82709PK1-2	2.2	0.1	71.2	10.4	11.7	0.1	0.6	5.2	0.7	58.1	
82709PK1-3	2.4	0.1	67.1	15.5	16.8	0.2	0.7	8.4	0.8	66.4	
82709PK1	**2.3**	**0.1**	**74.5**	**11.7**	**14.1**	**0.2**	**0.7**	**5.2**	**0.7**	**55.3**	*0.1*
82709PK3-1	44.8	2.7	26.8	92.7	61.6	3.5	8.3	3.6	0.7	51.0	
82709PK3-2	49.9	3.0	32.2	128.8	80.3	4.0	11.2	2.2	0.7	44.9	
82709PK3-3	46.0	2.8	35.9	126.5	73.5	3.5	9.9	1.3	0.6	38.1	
82709PK3	**46.9**	**2.8**	**31.6**	**116.0**	**71.8**	**3.7**	**9.8**	**2.3**	**0.6**	**44.7**	*2.6*
KS08310903-1	61.8	3.7	11.0	56.6	97.7	5.2	5.0	1.2	0.6	37.3	
KS08310903-2	49.2	3.0	15.6	84.1	102.8	5.4	5.8	1.4	0.6	38.0	
KS08310903-3	59.2	3.6	11.6	69.7	132.2	6.0	5.6	1.3	0.6	38.0	
KS08310903-4	53.3	3.2	10.7	56.8	101.5	5.3	4.7	2.0	0.6	44.2	
KS08310903	**55.9**	**3.4**	**12.2**	**66.8**	**108.5**	**5.5**	**5.2**	**1.5**	**0.6**	**39.4**	*5.7*
LNG0109-1	2.7	0.2	24.0	8.0	27.1	0.3	0.2	1.4	0.6	38.2	
LNG0109-2	3.0	0.2	19.0	12.4	84.0	0.7	0.3	4.7	0.7	58.3	
LNG0109-3	2.6	0.2	17.8	7.7	10.4	0.4	0.2	5.5	0.8	60.6	
LNG0109	**2.7**	**0.2**	**20.3**	**9.4**	**40.5**	**0.5**	**0.2**	**3.9**	**0.7**	**52.4**	*0.2*
LNG0209-1	3.1	0.2	121.0	59.0	33.2	0.5	1.7	5.3	0.8	61.9	
LNG0209-2	2.9	0.2	203.4	120.7	27.0	0.6	2.6	4.6	0.7	56.3	
LNG0209-3	2.8	0.2	213.0	129.5	37.2	0.6	2.7	3.9	0.7	55.6	
LNG0209	**2.9**	**0.2**	**179.1**	**103.1**	**32.4**	**0.6**	**2.3**	**4.6**	**0.7**	**57.9**	*0.2*
LNG0409-1	4.1	0.2	28.9	48.9	106.9	1.7	0.6	3.0	0.6	39.1	
LNG0409-2	3.9	0.2	24.8	44.8	94.8	1.8	0.5	3.5	0.6	40.4	
LNG0409-3	3.9	0.2	63.9	83.8	163.6	1.3	1.1	1.2	0.6	36.6	
LNG0409	**4.0**	**0.2**	**39.2**	**59.2**	**121.7**	**1.6**	**0.7**	**2.6**	**0.6**	**38.7**	*0.1*
LNG0809-1	7.9	0.5	4.4	20.7	70.8	4.7	0.3	3.1	0.7	50.2	
LNG0809-2	6.8	0.4	6.8	23.8	83.4	3.5	0.3	2.4	0.7	47.7	
LNG0809-3	6.8	0.4	4.8	17.8	79.5	3.7	0.2	2.0	0.7	44.3	
LNG0809-4*	11.5	0.7	5.4	17.2	60.4	3.2	0.4	1.0	0.6	34.8	
LNG0809	**8.3**	**0.5**	**5.4**	**19.9**	**73.5**	**3.8**	**0.3**	**2.1**	**0.6**	**44.2**	*2.2*
MT06300601-1	3.3	0.2	12.4	15.5	72.1	1.2	0.2	3.7	0.6	38.5	
MT06300601-2	4.0	0.2	10.9	8.9	66.7	0.8	0.2	5.0	0.7	45.0	
MT06300601-3	4.1	0.2	52.1	14.7	84.8	0.3	0.8	3.5	0.6	40.6	
MT06300601	**3.8**	**0.2**	**25.1**	**13.0**	**74.5**	**0.8**	**0.4**	**4.0**	**0.6**	**41.4**	*0.4*

MT06300602-1	4.7	0.3	5.5	13.5	17.6	2.5	0.1	5.3	0.7	47.3	
MT06300602-2	3.4	0.2	5.2	16.0	20.3	3.1	0.1	2.7	0.6	37.7	
MT06300602-3	3.3	0.2	6.4	19.1	29.7	3.0	0.1	4.2	0.7	44.7	
MT06300602	**3.8**	**0.2**	**5.7**	**16.2**	**22.5**	**2.8**	**0.1**	**4.1**	**0.6**	**43.2**	*0.8*
MT06300603-1	3.5	0.2	7.7	6.2	26.0	0.8	0.1	8.1	0.7	41.6	
MT06300603-2	2.6	0.2	9.8	7.3	21.4	0.7	0.1	16.3	0.8	54.3	
MT06300603-3	3.5	0.2	10.3	7.1	15.9	0.7	0.2	9.0	0.7	41.5	
MT06300603	**3.2**	**0.2**	**9.2**	**6.9**	**21.1**	**0.7**	**0.1**	**11.1**	**0.8**	**45.8**	*0.5*
MT06300604-1	3.1	0.2	15.9	7.4	13.9	0.5	0.2	10.0	0.7	57.4	
MT06300604-2	2.7	0.2	41.7	32.2	24.4	0.8	0.5	3.6	0.6	40.1	
MT06300604-3	2.3	0.1	21.3	12.6	17.3	0.6	0.2	7.5	0.7	52.2	
MT06300604	**2.7**	**0.2**	**26.3**	**17.4**	**18.5**	**0.6**	**0.3**	**7.1**	**0.7**	**49.9**	*0.4*
MT06300605-1	1.3	0.1	11.1	17.7	30.9	1.6	0.1	3.5	0.6	40.8	
MT06300605-2	3.5	0.2	39.0	20.0	24.8	0.5	0.5	3.8	0.7	42.4	
MT06300605-3	3.3	0.2	11.7	18.0	57.6	1.5	0.2	4.1	0.6	42.9	
MT06300605	**2.7**	**0.2**	**20.6**	**18.6**	**37.8**	**1.2**	**0.3**	**3.8**	**0.6**	**42.1**	*1.2*
MT07020605-1	4.5	0.3	27.5	116.9	182.0	4.3	0.9	4.1	0.6	43.5	
MT07020605-2	1.2	0.1	9.6	31.0	140.4	3.2	0.1	3.5	0.6	40.0	
MT07020605-3	3.2	0.2	8.9	24.2	135.3	2.7	0.2	6.9	0.7	51.9	
MT07020605	**3.0**	**0.2**	**15.3**	**57.4**	**152.6**	**3.4**	**0.4**	**4.8**	**0.7**	**45.1**	*1.7*
				Zircon							
z67052-1	4.2	0.3	672.5	953.9	1.4	8.3	15.9	9.0	0.8	58.4	
z67052-2	3.5	0.3	301.7	213.3	1.5	2.3	4.9	5.3	0.8	48.0	
z67052-3	6.7	0.5	1015.6	388.2	1.0	7.3	30.5	5.2	0.8	48.8	
z67052	**4.8**	**0.4**	**663.3**	**518.5**	**1.3**	**6.0**	**17.1**	**6.5**	**0.8**	**51.7**	*1.7*
z67053-1	3.1	0.2	2523.5	310.7	3.8	25.8	34.4	8.6	0.8	56.2	
z67053-2	3.5	0.3	3689.2	439.4	1.7	33.4	56.3	8.2	0.8	56.7	
z67053-3	3.6	0.3	3246.4	447.0	1.6	24.3	48.8	6.2	0.8	47.7	
z67053	**3.4**	**0.3**	**3153.0**	**399.0**	**2.4**	**27.8**	**46.5**	**7.7**	**0.8**	**53.5**	*0.2*
z611051A-1	3.3	0.3	265.0	143.5	0.7	7.2	4.4	19.5	0.8	69.3	
z611051A-2	3.4	0.3	503.5	128.1	0.6	9.6	7.8	14.1	0.8	61.9	
z611051A-3	3.9	0.3	385.8	223.3	1.7	8.0	7.4	15.1	0.8	62.9	
z611051A	**3.5**	**0.3**	**384.8**	**165.0**	**1.0**	**8.3**	**6.5**	**16.3**	**0.8**	**64.7**	*0.3*
z69052-1	54.3	4.3	248.6	269.3	1.1	1.1	73.1	10.4	0.8	59.8	
z69052-2*	22.6	1.8	220.2	219.7	1.0	1.0	25.0	5.8	0.8	48.2	
z69052-3	49.0	3.9	296.0	247.1	1.4	0.8	69.2	4.3	0.7	45.0	
z69052-4*	75.2	6.0	111.3	46.4	0.4	0.4	39.8	10.7	0.8	58.9	
z69052-5	44.1	3.5	664.5	563.1	1.7	0.8	141.1	4.7	0.7	46.0	
z69052-6	48.0	3.8	657.8	368.5	1.0	0.6	148.1	5.6	0.8	50.3	
z69052	**48.8**	**3.9**	**466.7**	**362.0**	**1.3**	**0.8**	**107.9**	**6.2**	**0.8**	**50.3**	*4.2*
z82109PK1-1	57.4	4.6	228.3	337.9	10.9	1.6	70.5	4.9	0.7	45.7	
z82109PK1-2	71.6	5.7	319.1	319.1	1.5	2.5	115.4	5.5	0.8	48.6	
z82109PK1-3	62.0	5.0	192.7	198.9	0.8	1.5	61.5	5.5	0.8	50.9	
z82109PK1	**63.7**	**5.1**	**246.7**	**285.3**	**4.4**	**1.9**	**82.5**	**5.3**	**0.8**	**48.4**	*7.3*
z82209PK1-1	63.0	5.0	306.1	226.6	1.3	0.7	97.2	9.0	0.8	57.9	
z82209PK1-2	55.1	4.4	615.1	380.7	1.1	0.6	159.5	5.4	0.8	48.9	
z82209PK1-3	57.3	4.6	297.6	224.6	0.4	0.8	83.8	6.0	0.8	51.8	

z82209PK1	**58.5**	**4.7**	**406.3**	**277.3**	**0.9**	**0.7**	**113.5**	**6.8**	**0.8**	**52.9**	***4.1***
z82309PK1-1	2.7	0.2	1265.7	232.4	-0.3	0.2	14.0	3.1	0.7	42.1	
z82309PK1-2	2.8	0.2	1618.2	1169.5	1.2	0.7	20.3	3.4	0.7	42.0	
z82309PK1-3	2.5	0.2	928.3	235.7	0.8	0.3	10.6	8.2	0.8	57.3	
z82309PK1	**2.7**	**0.2**	**1270.7**	**545.9**	**0.6**	**0.4**	**15.0**	**4.9**	**0.7**	**47.1**	***0.1***
z82309PK2-1	4.0	0.3	1831.8	913.0	1.4	0.5	33.0	4.7	0.7	45.4	
z82309PK2-2	3.3	0.3	1476.4	682.7	2.1	0.5	22.7	7.9	0.8	54.0	
z82309PK2-3	2.7	0.2	1159.9	468.3	1.1	0.4	13.9	5.3	0.8	49.5	
z82309PK2	**3.3**	**0.3**	**1489.4**	**688.0**	**1.5**	**0.5**	**23.2**	**6.0**	**0.8**	**49.6**	***0.7***
z82309PK4-1	2.3	0.2	890.2	638.8	2.5	0.7	9.2	3.3	0.7	42.2	
z82309PK4-2	4.4	0.3	601.0	323.9	0.8	0.5	12.0	4.2	0.7	46.7	
z82309PK4-3	2.8	0.2	1010.3	624.6	4.6	0.6	13.0	4.9	0.8	47.6	
z82309PK4	**3.1**	**0.3**	**833.8**	**529.1**	**2.6**	**0.6**	**11.4**	**4.1**	**0.7**	**45.5**	***1.1***
z82309PK5-1	3.3	0.3	1309.7	850.8	3.2	0.6	19.5	4.7	0.7	44.3	
z82309PK5-2	3.7	0.3	786.8	306.8	0.6	0.4	13.5	8.9	0.8	57.4	
z82309PK5-3*	77.1	6.2	319.7	275.0	2.3	0.9	130.1	13.4	0.8	63.7	
z82309PK5-4	5.0	0.4	1148.5	405.3	2.4	0.4	25.5	5.2	0.8	49.7	
z82309PK5-5	8.9	0.7	1211.9	402.9	2.1	0.3	44.6	3.4	0.7	39.8	
z82309PK5-6	4.5	0.4	1053.4	1226.9	14.8	1.2	23.7	3.9	0.7	44.1	
z82309PK5	**5.0**	**0.4**	**1102.1**	**638.6**	**4.6**	**0.6**	**25.3**	**5.2**	**0.7**	**47.1**	***2.2***
z82409PK1-1	77.4	6.2	113.5	121.6	0.7	1.1	44.8	4.9	0.8	48.1	
z82409PK1-2	66.3	5.3	96.6	130.0	0.5	1.3	33.0	3.5	0.7	42.8	
z82409PK1-3	103.0	8.2	131.3	145.2	0.7	1.1	71.8	6.8	0.8	53.6	
z82409PK1-4	91.9	7.3	302.2	499.7	2.1	1.7	158.9	5.1	0.8	50.3	
z82409PK1-5	113.8	9.1	116.6	135.0	0.9	1.2	67.1	3.8	0.7	44.3	
z82409PK1-6	102.4	8.2	283.5	346.7	1.7	1.2	148.8	4.2	0.7	44.6	
z82409PK1	**92.5**	**7.4**	**174.0**	**229.7**	**1.1**	**1.3**	**87.4**	**4.7**	**0.7**	**47.3**	***17.7***
z82409PK2-1	69.2	5.5	191.8	180.1	0.7	0.9	70.1	9.3	0.8	59.9	
z82409PK2-2	84.8	6.8	234.4	208.6	4.1	0.9	101.6	7.7	0.8	54.5	
z82409PK2-3	79.4	6.4	155.4	168.6	1.4	1.1	65.2	6.6	0.8	53.9	
z82409PK2	**77.8**	**6.2**	**193.9**	**185.8**	**2.1**	**1.0**	**79.0**	**7.9**	**0.8**	**56.1**	***7.9***
z82609PK4-1	4.4	0.4	2563.8	1455.1	3.1	0.6	50.8	4.3	0.7	44.7	
z82609PK4-2	3.7	0.3	1056.1	573.6	2.7	0.5	18.7	6.5	0.8	53.6	
z82609PK4-3	2.1	0.2	1479.0	1302.3	2.3	0.9	15.1	3.9	0.7	44.2	
z82609PK4	**3.4**	**0.3**	**1699.6**	**1110.3**	**2.7**	**0.7**	**28.2**	**4.9**	**0.8**	**47.5**	***1.2***
z82609PK5-1	5.0	0.4	2701.1	1631.1	3.3	0.6	64.6	8.8	0.8	54.7	
z82609PK5-2	7.6	0.6	2732.1	1370.3	1.2	0.5	90.9	3.4	0.7	42.9	
z82609PK5-3*	11.1	0.9	1035.3	611.3	0.0	0.6	50.9	3.3	0.7	41.9	
z82609PK5-4	4.8	0.4	709.1	636.8	2.2	0.9	15.6	2.8	0.7	39.2	
z82609PK5-5	4.6	0.4	1719.0	1306.8	1.3	0.8	35.0	2.7	0.7	38.4	
z82609PK5-6	5.2	0.4	2865.8	3853.8	1.3	1.3	74.0	2.7	0.7	38.5	
z82609PK5	**5.4**	**0.4**	**2145.4**	**1759.8**	**1.9**	**0.8**	**56.0**	**4.1**	**0.7**	**42.7**	***1.2***
z82709PK2-1	3.7	0.3	270.2	81.9	0.4	0.3	4.3	4.4	0.8	46.2	
z82709PK2-2	4.0	0.3	152.3	69.5	0.2	0.5	2.7	4.1	0.7	45.1	
z82709PK2-3	5.0	0.4	180.0	64.6	0.2	0.4	4.1	7.2	0.8	52.7	
z82709PK2	**4.2**	**0.3**	**200.8**	**72.0**	**0.3**	**0.4**	**3.7**	**5.3**	**0.8**	**48.0**	***0.7***
z82709PK3-1	83.1	6.6	192.7	165.8	0.5	0.9	83.6	9.5	0.8	60.7	

z82709PK3-2	98.1	7.8	201.0	172.6	0.8	0.9	104.3	13.1	0.8	63.9	
z82709PK3-3	86.7	6.9	165.9	132.7	0.6	0.8	76.9	16.3	0.8	71.5	
z82709PK3	**89.3**	**7.1**	**186.5**	**157.0**	**0.6**	**0.8**	**88.3**	**13.0**	**0.8**	**65.4**	*7.8*
z82809PK1-1	7.0	0.6	95.6	93.3	0.1	1.0	3.4	6.1	0.8	51.4	
z82809PK1-2	13.6	1.1	175.4	166.4	0.5	0.9	12.3	7.3	0.8	54.9	
z82809PK1-3	8.8	0.7	69.4	64.7	1.0	0.9	3.1	7.0	0.8	54.2	
z82809PK1-4	32.7	2.6	24.0	17.0	0.1	0.7	4.1	23.2	0.8	75.6	
z82809PK1-5	24.3	1.9	31.4	32.7	0.2	1.0	4.0	7.8	0.8	53.5	
z82809PK1-6	19.2	1.5	44.2	50.7	0.4	1.1	4.5	7.4	0.8	54.2	
z82809PK1	**17.6**	**1.4**	**73.3**	**70.8**	**0.4**	**1.0**	**5.2**	**9.8**	**0.8**	**57.3**	*9.8*
z82909PK1-1	50.8	4.1	276.7	239.5	0.4	1.7	66.9	4.1	0.7	43.8	
z82909PK1-2	70.1	5.6	61.3	88.6	0.8	0.4	23.1	4.5	0.7	46.2	
z82909PK1-3	69.4	5.6	237.1	249.6	2.6	1.2	81.4	3.5	0.7	44.1	
z82909PK1	**63.5**	**5.1**	**191.7**	**192.6**	**1.3**	**1.1**	**57.1**	**4.0**	**0.7**	**44.7**	*11.0*
z82909PK2-1	96.6	7.7	161.7	191.5	1.5	1.0	79.7	4.3	0.7	44.9	
z82909PK2-2	89.5	7.2	522.3	360.6	0.6	3.2	217.3	4.2	0.7	44.6	
z82909PK2-3	75.0	6.0	249.1	244.6	2.4	3.3	99.2	9.2	0.8	59.0	
z82909PK2	**87.1**	**7.0**	**311.0**	**265.6**	**1.5**	**2.5**	**132.1**	**5.9**	**0.8**	**49.5**	*11.0*
zKS08270901-1	2.7	0.2	1530.9	324.1	0.4	9.7	17.6	4.7	0.7	44.4	
zKS08270901-2	2.6	0.2	1617.2	428.4	1.1	12.1	18.6	5.6	0.8	48.3	
zKS08270901-3	3.7	0.3	3576.6	662.0	0.4	29.4	57.9	7.2	0.8	51.0	
zKS08270901	**3.0**	**0.2**	**2241.6**	**471.5**	**0.6**	**17.1**	**31.4**	**5.8**	**0.8**	**47.9**	*0.6*
zKS08270903-1	3.4	0.3	999.7	258.9	1.5	7.7	14.9	5.6	0.8	48.1	
zKS08270903-2	3.2	0.3	3412.2	473.5	7.4	24.5	47.1	6.0	0.8	51.3	
zKS08270903-3	3.7	0.3	4031.3	1056.1	3.6	19.4	63.0	3.8	0.7	43.8	
zKS08270903	**3.4**	**0.3**	**2814.4**	**596.2**	**4.2**	**17.2**	**41.7**	**5.1**	**0.8**	**47.7**	*0.3*
zKS08280901-1	2.6	0.2	763.8	182.0	0.3	3.8	8.2	3.5	0.7	40.5	
zKS08280901-2	5.6	0.4	173.2	44.6	0.4	1.8	4.4	7.2	0.8	55.6	
zKS08280901-3	2.4	0.2	2437.9	152.0	0.7	12.4	23.0	3.8	0.7	41.4	
zKS08280901	**3.5**	**0.3**	**1125.0**	**126.2**	**0.4**	**6.0**	**11.9**	**4.8**	**0.7**	**45.8**	*1.8*
zKS08280902-1	2.7	0.2	815.8	291.0	0.0	5.2	9.7	4.5	0.8	47.5	
zKS08280902-2	2.7	0.2	1338.4	611.3	0.8	6.3	15.7	3.4	0.7	42.1	
zKS08280902-3	3.0	0.2	2065.2	1852.1	2.9	10.4	29.4	3.7	0.7	43.4	
zKS08280902	**2.8**	**0.2**	**1406.5**	**918.2**	**1.2**	**7.3**	**18.2**	**3.9**	**0.7**	**44.4**	*0.2*
zKS08280903-1	2.9	0.2	2108.2	766.1	0.4	29.7	28.6	12.3	0.8	61.8	
zKS08280903-2	2.7	0.2	2886.2	396.8	-0.3	12.3	31.0	3.2	0.7	41.4	
zKS08280903-3	2.6	0.2	2597.3	305.1	0.0	15.8	28.6	4.7	0.8	46.9	
zKS08280903	**2.7**	**0.2**	**2530.6**	**489.3**	**0.0**	**19.2**	**29.4**	**6.7**	**0.8**	**50.0**	*0.1*
zKS08280905-1	3.4	0.3	9508.0	486.9	0.5	57.5	140.2	7.1	0.8	56.3	
zKS08280905-2	3.0	0.2	9189.7	642.5	0.3	46.6	117.0	5.3	0.8	51.1	
zKS08280905-3	3.3	0.3	7705.2	399.5	0.0	33.4	103.5	3.9	0.8	45.3	
zKS08280905	**3.2**	**0.3**	**8801.0**	**509.6**	**0.3**	**45.8**	**120.2**	**5.4**	**0.8**	**50.9**	*0.2*
zKS08280907-1	2.3	0.2	1291.4	420.6	0.6	5.3	12.7	2.9	0.7	41.5	
zKS08280907-2	2.8	0.2	1052.7	487.7	0.7	7.6	13.4	5.2	0.8	50.1	
zKS08280907-3	2.4	0.2	1770.9	706.5	0.0	6.8	18.4	2.8	0.7	41.4	
zKS08280907	**2.5**	**0.2**	**1371.7**	**538.2**	**0.4**	**6.6**	**14.9**	**3.6**	**0.7**	**44.3**	*0.2*
zKS08300901-1	4.1	0.3	732.0	146.4	1.4	0.2	13.2	8.2	0.8	54.6	

zKS08300901-2	3.6	0.3	1147.1	108.8	1.3	0.1	16.8	4.3	0.7	44.8	
zKS08300901-3	4.1	0.3	724.4	149.7	0.3	0.2	13.1	5.9	0.8	50.9	
zKS08300901	**3.9**	**0.3**	**867.8**	**134.9**	**1.0**	**0.2**	**14.4**	**6.2**	**0.8**	**50.1**	*0.3*
zKS08310901-1	39.1	3.1	112.5	91.6	0.6	0.8	21.1	4.3	0.7	45.9	
zKS08310901-2	36.3	2.9	314.8	200.6	0.5	0.6	54.0	5.0	0.8	49.3	
zKS08310901-3	43.8	3.5	357.9	250.8	0.6	0.7	76.9	7.6	0.8	54.1	
zKS08310901	**39.7**	**3.2**	**261.7**	**181.0**	**0.6**	**0.7**	**50.6**	**5.6**	**0.8**	**49.8**	*3.8*
zKS08310903-1	66.0	5.3	136.4	136.7	1.0	1.0	47.6	8.6	0.8	57.7	
zKS08310903-2	62.2	5.0	230.3	171.1	0.6	0.7	75.0	12.9	0.8	68.5	
zKS08310903-3	61.8	4.9	206.6	207.3	1.3	1.0	63.2	4.9	0.7	45.7	
zKS08310903	**63.3**	**5.1**	**191.1**	**171.7**	**0.9**	**0.9**	**62.0**	**8.8**	**0.8**	**57.3**	*2.3*
zKS08310904-1	3.5	0.3	960.7	729.4	1.3	0.8	16.7	9.5	0.8	56.9	
zKS08310904-2	2.8	0.2	516.9	386.3	1.2	0.7	7.4	8.6	0.8	58.1	
zKS08310904-3	2.9	0.2	1488.0	2009.0	2.8	1.4	23.6	5.8	0.8	50.9	
zKS08310904	**3.1**	**0.2**	**988.5**	**1041.6**	**1.8**	**1.0**	**15.9**	**8.0**	**0.8**	**55.3**	*0.3*
zLNG0109-1	3.3	0.3	167.0	89.1	0.3	0.5	2.7	10.6	0.8	61.6	
zLNG0109-2	2.9	0.2	202.5	96.9	0.3	0.5	2.7	6.3	0.8	52.1	
zLNG0109-3	4.1	0.3	194.7	100.9	0.3	0.5	3.6	5.4	0.8	47.6	
zLNG0109	**3.4**	**0.3**	**188.0**	**95.6**	**0.3**	**0.5**	**3.0**	**7.4**	**0.8**	**53.8**	*0.6*
zLNG0209-1	3.7	0.3	404.9	142.2	0.3	0.4	6.8	7.2	0.8	53.9	
zLNG0209-2	3.3	0.3	222.2	92.4	0.2	0.4	3.3	5.3	0.8	49.1	
zLNG0209-3	3.6	0.3	322.7	117.4	0.4	0.4	5.0	4.7	0.7	45.0	
zLNG0209	**3.5**	**0.3**	**316.6**	**117.3**	**0.3**	**0.4**	**5.0**	**5.7**	**0.8**	**49.3**	*0.2*
zLNG0409-1	4.7	0.4	226.0	72.5	0.2	0.3	5.1	12.8	0.8	66.9	
zLNG0409-2	4.6	0.4	191.6	84.0	0.6	0.4	4.1	8.0	0.8	53.4	
zLNG0409-3	4.6	0.4	349.9	83.0	0.2	0.2	6.8	4.6	0.7	45.5	
zLNG0409	**4.6**	**0.4**	**255.8**	**79.8**	**0.3**	**0.3**	**5.3**	**8.5**	**0.8**	**55.3**	*0.1*
zLNG0809-1	37.0	3.0	220.0	189.6	4.1	0.9	40.1	5.6	0.8	49.3	
zLNG0809-2	43.6	3.5	337.4	265.3	0.8	0.8	70.5	4.6	0.7	46.8	
zLNG0809-3	26.1	2.1	127.9	131.0	0.9	1.0	17.0	5.3	0.8	49.5	
zLNG0809	**35.6**	**2.8**	**228.4**	**195.3**	**1.9**	**0.9**	**42.5**	**5.2**	**0.8**	**48.6**	*8.8*
zMT06300601-1	3.8	0.3	473.1	136.0	1.3	0.3	8.0	6.1	0.8	51.1	
zMT06300601-2	4.3	0.3	261.1	52.7	1.0	0.2	4.8	5.4	0.8	46.5	
zMT06300601-3	3.1	0.3	297.2	91.6	1.4	0.3	4.1	6.5	0.8	50.7	
zMT06300601-4	3.8	0.3	873.9	183.3	0.5	0.2	13.5	3.6	0.7	40.9	
zMT06300601-5	3.7	0.3	331.5	113.4	0.5	0.3	5.4	5.2	0.7	46.3	
zMT06300601-6	3.8	0.3	155.7	53.0	0.3	0.3	2.7	8.1	0.8	51.7	
zMT06300601	**3.8**	**0.3**	**398.7**	**105.0**	**0.8**	**0.3**	**6.4**	**5.8**	**0.8**	**47.9**	*0.4*
zMT06300602-1	6.5	0.5	205.4	188.3	1.2	0.9	6.6	5.5	0.7	46.3	
zMT06300602-2	4.3	0.3	81.5	68.1	0.8	0.8	1.8	6.8	0.8	53.1	
zMT06300602-3	6.1	0.5	82.0	72.9	0.9	0.9	2.5	7.0	0.8	50.3	
zMT06300602-4	4.1	0.3	118.5	73.8	0.2	0.6	2.2	4.6	0.7	44.9	
zMT06300602-5	5.2	0.4	163.6	166.6	0.5	1.0	4.1	3.9	0.7	41.6	
zMT06300602-6	7.0	0.6	147.6	92.7	0.4	0.6	4.8	6.2	0.8	48.7	
zMT06300602	**5.6**	**0.4**	**133.1**	**110.4**	**0.7**	**0.8**	**3.7**	**5.7**	**0.7**	**47.5**	*1.2*
zMT06300603-1	3.5	0.3	659.7	307.4	1.6	0.5	10.4	8.1	0.7	52.6	
zMT06300603-2	3.9	0.3	153.1	131.5	1.7	0.9	3.1	16.3	0.8	44.9	

zMT06300603-3	4.5	0.4	345.3	94.4	0.6	0.3	6.7	9.0	0.8	45.7	
zMT06300603	**4.0**	**0.3**	**386.0**	**177.8**	**1.3**	**0.5**	**6.7**	**11.1**	**0.8**	**47.7**	*0.5*
zMT06300604-1	4.0	0.3	232.7	165.8	1.0	0.7	4.6	7.6	0.8	53.7	
zMT06300604-2	4.5	0.4	201.1	113.9	0.8	0.6	4.2	6.5	0.8	51.0	
zMT06300604-3	4.6	0.4	214.3	149.8	1.3	0.7	4.9	9.1	0.8	56.9	
zMT06300604	**4.4**	**0.4**	**216.0**	**143.2**	**1.1**	**0.7**	**4.6**	**7.7**	**0.8**	**53.9**	*0.3*
zMT06300605-1	3.8	0.3	294.8	161.8	1.4	0.5	5.0	3.9	0.7	44.0	
zMT06300605-2	4.0	0.3	322.6	161.0	1.0	0.5	5.7	3.9	0.7	43.7	
zMT06300605-3	3.5	0.3	236.9	159.7	1.0	0.7	4.1	9.2	0.8	57.6	
zMT06300605	**3.8**	**0.3**	**284.7**	**160.8**	**1.1**	**0.6**	**4.9**	**5.7**	**0.8**	**48.4**	*0.2*
zMT07020601-1	2.9	0.2	1843.3	797.5	7.4	0.4	23.9	5.3	0.8	48.8	
zMT07020601-2	3.3	0.3	859.9	254.7	0.9	0.3	12.8	7.1	0.8	55.5	
zMT07020601-3	3.1	0.2	2419.9	777.3	4.6	0.3	32.1	4.8	0.7	45.7	
zMT07020601	**3.1**	**0.2**	**1707.7**	**609.9**	**4.3**	**0.4**	**22.9**	**5.8**	**0.8**	**50.0**	*0.2*
zMT07020603-1	2.8	0.2	2115.2	380.8	1.9	0.2	24.6	4.2	0.7	45.6	
zMT07020603-2	2.7	0.2	2395.0	517.3	2.0	0.2	28.3	6.0	0.8	47.9	
zMT07020603-3	4.7	0.4	829.5	1119.2	3.6	1.3	23.6	22.2	0.8	79.5	
zMT07020603	**3.4**	**0.3**	**1779.9**	**672.4**	**2.5**	**0.6**	**25.5**	**10.8**	**0.8**	**57.7**	*1.2*
zMT07020604-1	2.0	0.2	881.7	288.3	1.6	0.3	7.9	6.5	0.8	53.8	
zMT07020604-2*	103.0	8.2	3.8	1.8	0.7	0.5	1.8	5.3	0.7		
zMT07020604-3	2.7	0.2	1876.5	860.8	5.5	0.5	22.0	3.4	0.7	42.5	
zMT07020604	**2.3**	**0.2**	**1379.1**	**574.6**	**3.6**	**0.4**	**15.0**	**4.9**	**0.8**	**48.2**	*0.5*
zMT07020605-1	2.9	0.2	1472.3	237.6	6.9	0.2	19.6	11.3	0.8	63.9	
zMT07020605-2	2.3	0.2	1294.1	422.8	2.3	0.3	13.2	5.7	0.8	50.6	
zMT07020605-3	3.0	0.2	2353.6	1863.7	4.5	0.8	34.4	5.0	0.8	47.8	
zMT07020605	**2.7**	**0.2**	**1706.6**	**841.4**	**4.5**	**0.4**	**22.4**	**7.3**	**0.8**	**54.1**	*0.4*
zMT07020606-1	2.1	0.2	226.2	147.9	1.3	0.7	2.4	10.1	0.8	57.8	
zMT07020606-2	2.7	0.2	2962.9	798.4	24.6	0.3	37.1	11.4	0.8	62.8	
zMT07020606-3	3.6	0.3	3316.9	990.8	3.9	0.3	53.1	6.1	0.8	49.4	
zMT07020606	**2.8**	**0.2**	**2168.7**	**645.7**	**9.9**	**0.4**	**30.9**	**9.2**	**0.8**	**56.7**	*0.8*
zMT07020607-1	3.5	0.3	662.4	585.1	5.1	0.9	11.5	5.9	0.8	50.3	
zMT07020607-2	3.1	0.2	999.3	128.4	1.6	0.1	13.2	5.9	0.8	48.8	
zMT07020607-3	2.8	0.2	2461.0	186.5	2.2	0.1	30.7	10.4	0.8	58.6	
zMT07020607	**3.1**	**0.3**	**1374.2**	**300.0**	**3.0**	**0.4**	**18.5**	**7.4**	**0.8**	**52.6**	*0.3*
zMT07020608-1	3.2	0.3	1722.6	780.9	83.0	0.5	25.1	5.4	0.8	48.0	
zMT07020608-2	3.1	0.2	2093.4	466.8	4.4	0.2	29.6	9.5	0.8	59.8	
zMT07020608-3	3.3	0.3	1074.5	419.1	2.5	0.4	16.6	9.6	0.8	58.8	
zMT07020608	**3.2**	**0.3**	**1630.2**	**555.6**	**30.0**	**0.4**	**23.8**	**8.2**	**0.8**	**55.5**	*0.1*

Detrital

zMT06170601-2	21.1	1.7	617.0	531.1	1.2	0.9	64.2	6.6	0.8		
zMT06170601-3	8.6	0.7	283.7	260.4	1.1	0.9	11.9	4.6	0.7	44.9	
zMT06170601-4	6.4	0.5	200.1	144.2	0.3	0.7	6.4	8.8	0.8	59.2	
zMT06170601-5	6.5	0.5	243.3	209.0	0.6	0.9	8.3	12.1	0.8	64.3	
zMT06170601-6	10.1	0.8	583.4	438.3	0.5	0.8	29.6	8.8	0.8	57.2	
zMT06170602-1	11.1	0.9	154.2	112.1	1.2	0.7	8.7	9.8	0.8	60.1	
zMT06170602-2	28.4	2.3	187.6	163.2	1.6	0.9	26.6	6.7	0.8		
zMT06170602-3	7.0	0.6	163.4	132.8	1.4	0.8	6.0	11.5	0.8	63.1	

zMT06170602-4*	1278.2	102.3	1.2	1.1	-0.3	0.8	8.7	6.5	0.8	49.5
zMT06170602-5	10.4	0.8	173.5	134.9	0.4	0.8	9.1	8.8	0.8	57.5
zMT06170602-6	14.0	1.1	345.8	257.9	1.3	0.7	22.9	5.2	0.7	46.3

All (U-Th)/He data produced at the University of Kansas Isotope Geochemistry Laboratory.
Abbreviations: Ft = Alpha ejection correction following Farley et al. (1996); ESR = Equivalent
*Spherical Radius. *Denotes aliquot excluded from age calculation due to inclusions*
(apatite) or poor reproducibility.