

Table T14. Correlations of seismic sequence boundaries to core surfaces, Hole M0027A. (See table notes.)

GTS 2008	Predicted age BKS95	Seismic sequence boundaries	Monteverde seismic picks		Predicted depth (mbsf)			Actual depth (mbsf)	Actual core, section, interval (cm)	Notes	Age derived from age-depth plot		
			ms	mbsf	Monteverde seismic range	Seismic	Predicted core				BKS95	GTS 2004 (Ma)	Error (Ma)
—	35 ka	MIC3a	—	—	12	12	313-M0027A-5H	10.41	313-M0027A-5H-1, 11	Base coarsening up	<90 ka	—	—
—	55 ka	MIC3c	—	—	—	24	13H	26.38	Base of 14H	Gravel	125–250 ka	—	—
—	70 ka	MIC4	—	—	24	36	22R	31.90	19H-1, 56	Based on core	LO Pleistocene?~1 Ma MIC30	—	—
11.58	11.5 Ma	m1	118	95	91–95	89–91	47H–48H	96	Top of ?50H-1	Based on log	No data	—	—
12.85	12.8 Ma	m2	—	—	91–94	NR	—	—	—	—	—	—	—
13.66	13.6 Ma	m3	—	—	NR	105–109	Not cored	115	Not cored	Based on log	No data	—	—
14.11	?14.1 Ma	m4	178	143	140–143	138–142	53H–54H	~140	Not cored	—	No data	—	—
—	—	m4.1	—	—	—	—	—	—	66X-2	Based on core	?13.5 Ma	?13.6	Poorly constrained
14.8–15.8	14.8–15.8 Ma	m4.5	256	210	208–211	210–215	72H–73X	218.39	75X-2, 68	Granulated sand/silty clay	?14.2–14.8 Ma	?14.0–15.0	Poorly constrained
—	—	m5	—	—	—	—	—	—	—	Merged with m4.5	—	—	—
16.0–16.5	16.0–16.5 Ma	m5.2	276	227	226–228	225–230	80R–81R	225	80R-1, 10	Pebbly lag, gamma core minimum; mcd shift	?15.6–16.0 Ma	?15.6–16.0	14.5–15.5
—	—	?Unnamed	—	—	—	—	—	231.46	Top of 82R-1	Pebbly lag	?15.6–16.0 Ma	<15.6	14.5–15.5
17.2	17.2 Ma	m5.3	291	240	239–242	235–240	83R–84R	237.17	83R-2, 127	Sand/tight clay	~16.0 Ma	15.7	15.0–15.7
—	—	MFS/SB	—	—	—	—	—	253.21	89R-1, 40	—	—	—	—
—	—	TS	—	—	—	—	—	255.16	89R-2, 85	—	—	—	—
—	—	SB ?m5.32	—	259	258–260	—	—	256.19	90R-1, 33	Lag, USF over offshore	~16.3 Ma	~16.3	15.8–16.3
17.6–17.7	17.8–18.2 Ma	m5.4	338	282	281–284	278–282	97R–98R	271.21	95R-1, 10	SOT over offshore	~17.3 Ma	~17.3	16.3–17.8
—	—	?Unnamed	—	—	—	—	—	295.01	102R-2, 105	Erosion surface	~17.8 Ma	~17.6	17.2–18.2
19.2	19.5 Ma	m5.45	390	329	328–331	325–330	112R–113R	331.90	114R-2, 133.5	Sharp contact; SOT over offshore	~18.3 Ma	~18.1	17.3–18.5
19.3	19.7 Ma	m5.47	403	342	340–343	335–340	116R–117R	336.06	116R-1, 90	Erosion surface, top glauconite	~18.4 Ma	~18.2	17.5–18.5
19.7	20.1 Ma	m5.5	—	—	—	NR	—	—	—	—	—	—	—
—	—	?FS	—	—	—	—	—	—	Top of 121R-1	—	—	—	—
19.8	20.2 Ma	m5.6	403	347	346–349	345–350	121R–122R	355.53	125R-1, 140	Cemented zone	?20.0–19.0 Ma	19.6–18.7	20.0–18.5
19.9	20.4 Ma	m5.7	423	360	359–362	350–360	123R–126R	>361.28	Below 127R-2, 22	Core gap, gamma log kick	?20.0–19.0 Ma	19.6–18.7	20.0–18.5
—	—	mFS	—	—	—	450–460	158R–160R	465.00	162R	Benthic foraminifers: shallowing	—	—	—
20.9–21.4	21.5–22.0 Ma	m5.8	546	478	476–480	470–480	164R–166R	487.66/488.87/489.39	Top of 169R-CC/170R-CC, 2/top of 172R	Indurated zone	21.1 Ma	20.5	20.5–21.5
—	—	m6	569	501	499–503	475–80	166R–167R	494.87	174R-1, 111	Either base indurated or facies changes/gamma peak pull up	22.0 Ma	21.3	21.0–23.0
—	23.5–24.0 Ma	o.5	608	540	540–545	540–545	191R–192R	539.51	Top of ?192R	No core surface	24.5 Ma	23.8	24.0–27.5
33.2–34.2	33.0–34.0 Ma	o1	654	587	585–590	585–590	207R–208R	585.48	209R-1, 22	Core pick	29.0 Ma	29.0	28.5–30.0
—	—	Surface in core	—	—	—	—	—	?596.3	?212R-2, 39	Core pick	30.2 Ma	30.3	29.0–31.0
—	—	—	—	—	—	—	—	617.00	?219R-1, 124	Core pick	?	—	—
—	—	Surface EOT	—	—	—	—	—	625.83	223R-1, 93	Core pick	32.8 Ma	33.0	32.2–32.8

Notes: GTS = geologic timescale. GTS 2008 = Ogg et al. (2008). Predicted age for BKS95 (Cande and Kent, 1995) from Monteverde et al. (2008) and Miller et al. (1998). Seismic sequence boundaries from Monteverde et al. (2008), Miller et al. (1998), and Sheridan et al. (2000). Predicted depths based on seismic velocity function. Predicted depth and ages for seismic sequence boundaries MIC3a to o1 from Monteverde et al. (2008) for the pre-Pleistocene and Sheridan et al. (2000) for the Pleistocene. Two predicted depths in two way travel time (TWT) and depth (mbsf) are given, the first from Monteverde et al. (2008) and the second from Mountain et al. (2009). Actual depth and actual core are the best fit to surfaces or other contacts noted in the cores. Preliminary age is derived from "Chronology." MIC = marine isotope chron, MFS = maximum flooding surface, SB = sequence boundary GTS2008 (Ogg et al., 2008), TS = transgressive surface, FS = flooding surface, EOT = Eocene–Oligocene transition. NR = none recovered. USF = upper shoreface, SOT = shoreface–offshore transition.