Supplemental Material

Figure S1. Age-depth model for Site U1445. To determine the ages of our samples, we fit the biostratigraphic and magentostratigraphic age constraints (Clemens et al., 2016) with an age-depth model using CLAM software in R (Blaauw, 2010). We ran iterations of the model with different types of fit and levels of smoothing, and identified a locally weighted spline with 0.4 smoothing to best represent the trends observed in the age constraints. The differences between the age models iterations are not significant and would not change the interpretations of this study.

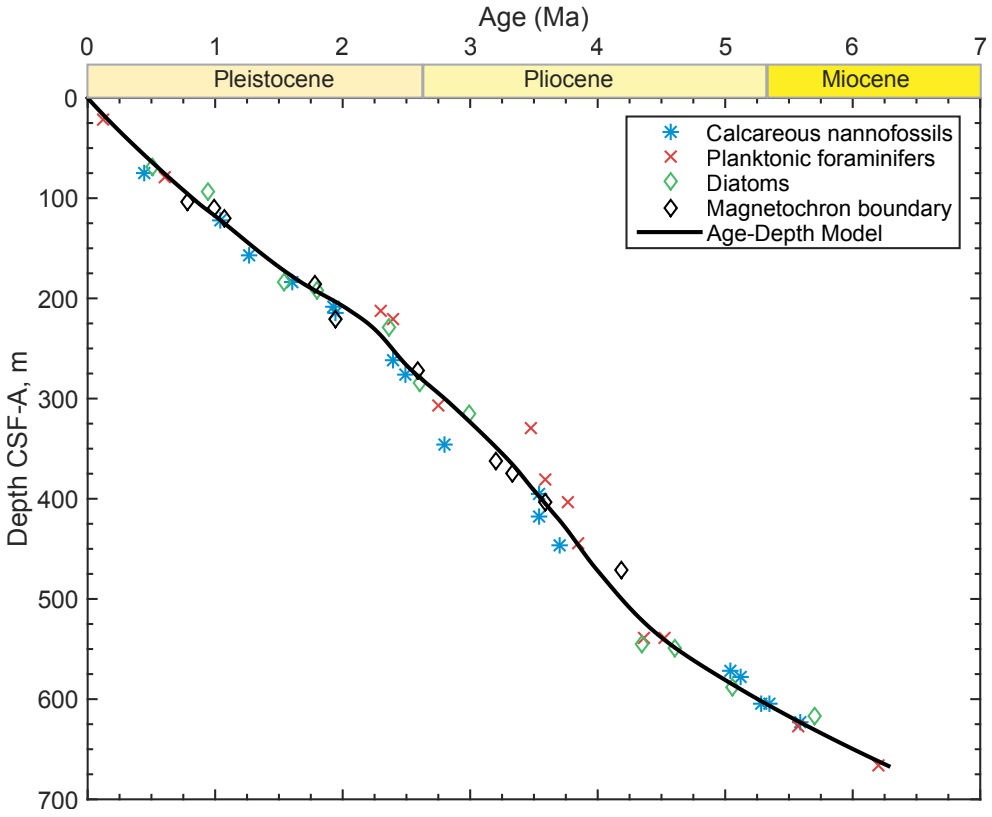

Figure S2. La-Th-Sc diagram of 30 sediment samples from the Bay of Bengal. Samples from IODP Site U1445 (blue squares) are plotted as well IODP Site U1444 (green diamonds), NGHP Site 19 (purple triangles), and NGHP Site 16 (brown circles) in the Bay of Bengal. Average upper continental crust (black square, Rudnick and Gao, 2014), post-Archean average Australian Shale (black dot, Taylor and McLennan, 1985), and average mid-ocean ridge basalt (Gale et al., 2013) compositions are plotted for reference.

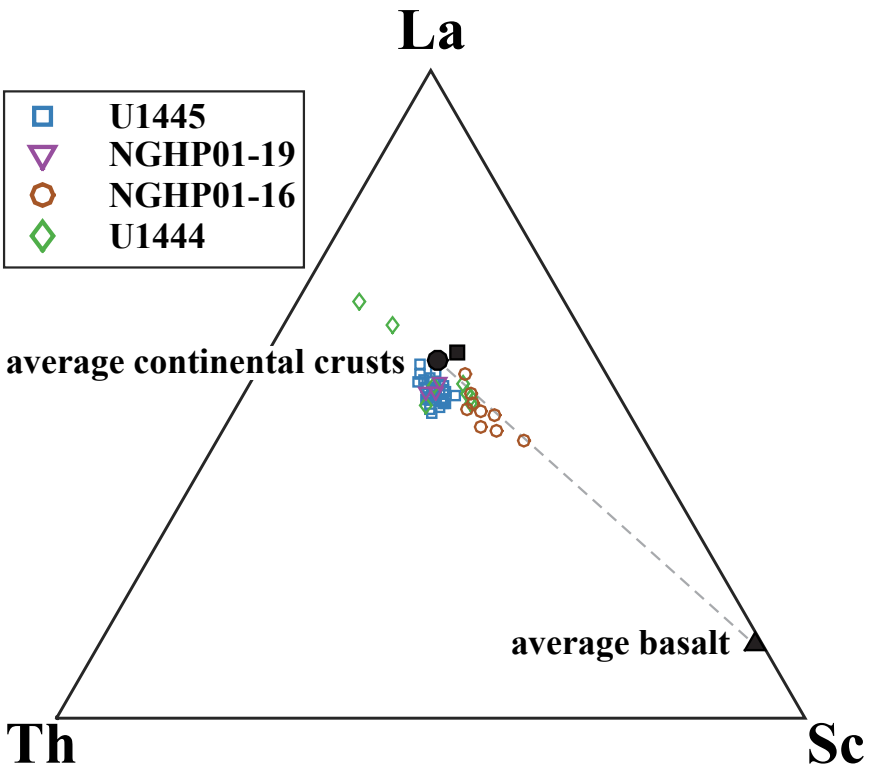

Figure S3. Carbonate and bulk organic analyses at Site U1445. Analysis of 57 samples at IODP Site U1445 for (a) bulk calcium carbonate content (weight %) calculated as (total inorganic carbon x (8.33313 $CaCO_3$ wt/C wt)), (b) total organic carbon concentration (weight %), (c) total acidified nitrogen content (weight %), (d) Ratio of total organic carbon to total nitrogen (TOC/TN, wt.%/wt.%) and (e) carbon isotopes of the total organic carbon (per mil). Black dots represent visually darker layers relative to a lighter layer (white dot) at a similar depth. TOC/TN shows a distinct increase in the mid-Pliocene, but remains within the range of TOC/TN expected for marine organic material.

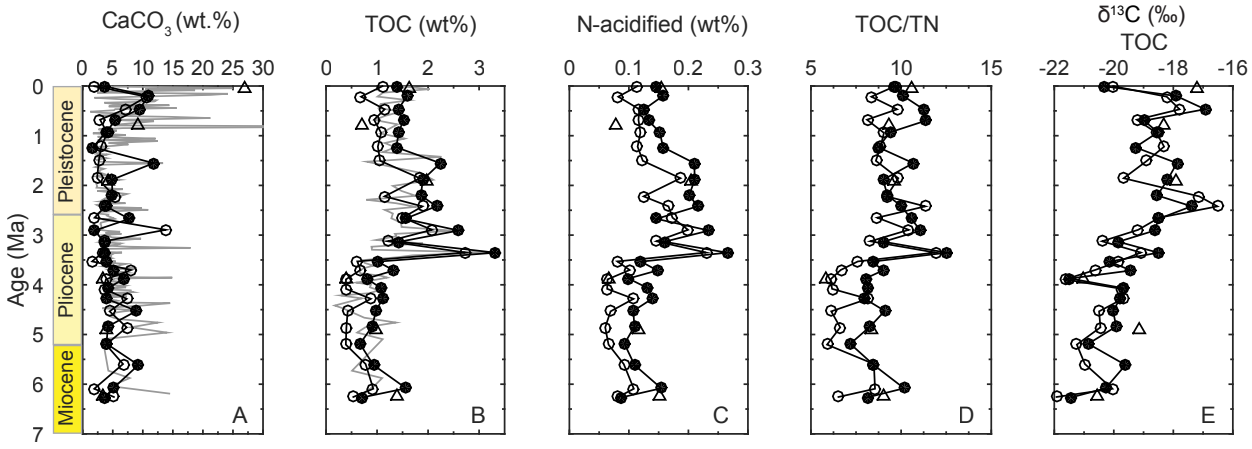

Figure S4. Long-chain fatty acids from leaf waxes extracted from Site U1445. Plotted from left to right are hydrogen isotopes and then carbon isotopes of leaf wax fatty acids from chainlengths C_{26}, C_{28}, and C_{30}.

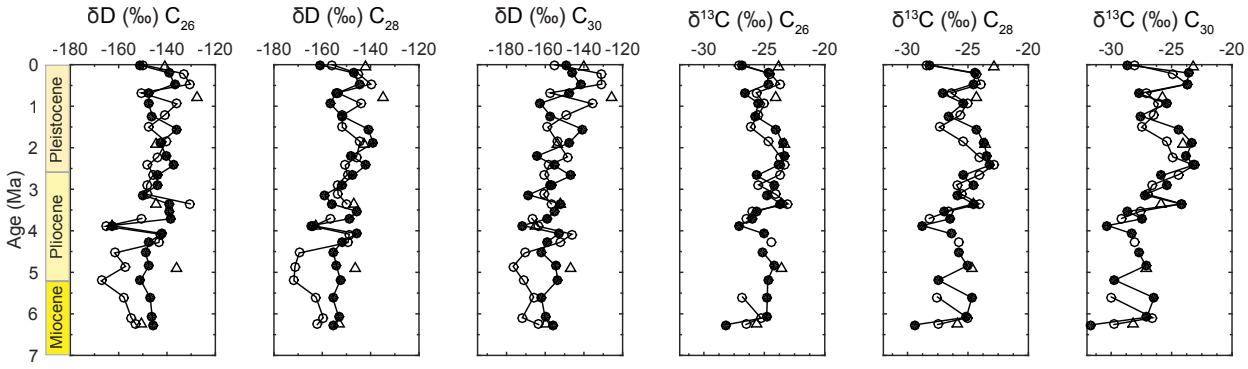

Figure S5. Correcting δD for differences in fractionation due to plant physiology. (a) Raw, uncorrected $\delta^{13}C_{FA}$ plotted for comparison. (b) Calculated fraction of C_4 vegetation with grey lines indicating the maximum and minimum boundaries. (c) Uncorrected δD data, plotted here for comparison. (d) The δD data corrected for differences between C_3 and C_4 plant physiologies.

We used the $\delta^{13}C_{FA}$ to calculate the relative percentages of C_3 and C_4 vegetation and then correct the δD for differences in plant physiology (Smith and Freeman, 2006; Chikaraishi and Naraoka, 2007). For consistency with other studies in proximity to our marine sediment site, we used the end-member values of Ponton et al. (2012). They used values reported in Chikaraishi et al. (2004) extracted from 52 measurements of $\delta^{13}C$ for n-alkanoic acids isolated from different plant species of C_3 plants between C_{26} and C_{32} averaging -37.7 ± 1.8 ‰ and 16 measurements of the same compounds in C_4 plants with an average of -21.1 ± 1.4 ‰. We use these same end-member values [-37.7 ‰ = 0% C_4 plants; -21.1 ‰= 100% C_4], to calculate our $\delta^{13}C$ plant wax values as a percentage of C_4 plants. The maximum and minimum fractions of C_4 vegetation (gray lines) were calculated with the standard deviation of $\delta^{13}C$ within the C_3 and C_4 groups (Ponton et al., 2012).

We estimate the offset in δD between C_3 and C_4 plants to be ~25‰ (Smith and Freeman, 2006; Ghosh et al., 2017) where C_3 is on average 25 ‰ lighter than C_4 vegetation. Using the fraction of C_4 relative to C_3 estimated from the $\delta^{13}C_{FA}$, we correct the δD of each sample for the differences in plant physiology.

The corrected data shows the same overall trend as the uncorrected data, except the values are shifted to be more negative and the change in δD between ~3.5 and ~1.5 Ma is steeper. Thus, the correction emphasizes the drying trend that we interpret in the data. Since we are interpreting δD as a qualitative proxy for aridity or the relative amount of precipitation, the slope of the δD change has no impact on our interpretations of the data. The corrected δD data is discussed in the main text of the manuscript.

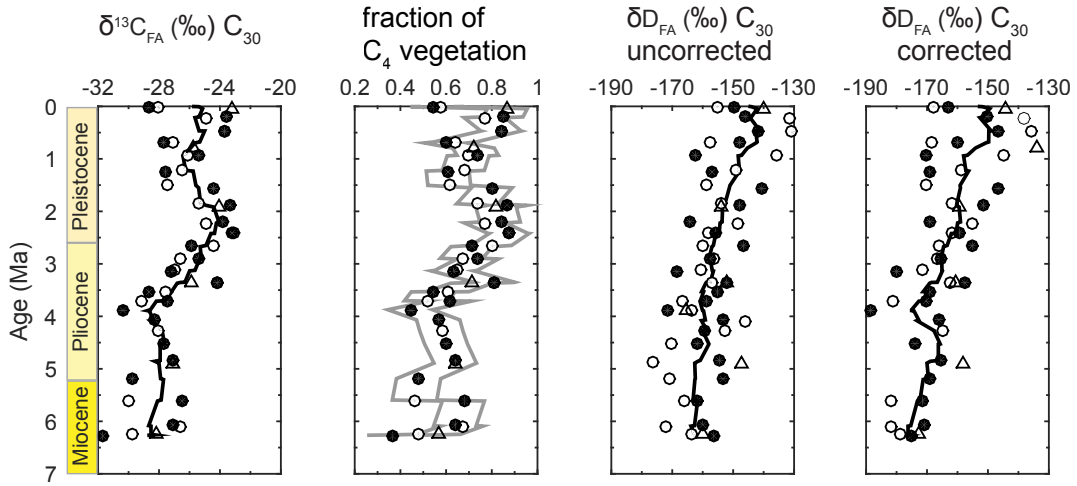

Table S1. Concentrations of major, trace, and rare earth elements. Inorganic analyses of major, trace, and rare earth element concentrations for 30 bulk sediment samples at Site U1445 and additional samples from other sites in the Bay of Bengal for reference. For methods see Appendix A or details in Dunlea et al. (2015).

Table S2. Carbonate and bulk organic analyses data at Site U1445. Analysis of 57 samples at Site U1445 for bulk calcium carbonate, total organic carbon, total carbon, total acidified nitrogen, carbon isotopes of the total organic carbon, and the designation of visually lighter versus darker samples at similar depths.

Table S3. Carbon and hydrogen isotope analysis of leaf wax fatty acids at Site U1445. Hydrogen isotopes and carbon isotope analyses of leaf wax fatty acids extracted from 57 samples at Site U1445. Measurements from fatty acid chainlengths C_{26}, C_{28}, and C_{30} are reported with their standard deviation. The correction for C_3-C_4 physiological differences in the hydrogen isotopes of C_{30} fatty acids is reported, estimating C_3 vegetation as having a $\delta^{13}C$ of -35.4 ‰ and C_4 vegetation as -21.4‰ (Fig. S5).

Supplemental Table S1

Exp	Site	Hole	Core	Type	Sect	W	Top	Bot	Depth	Age	Si	Al	Ti	Fe	Mn	Ca	Mg	Na	K	P	Li	Be	Sc	V	Cr	Co	Ni
									mbsf, CSF-A	Ma	wt. %	wt. %	wt. %	wt. %	wt. %	wt. %	wt. %	wt. %	wt. %	wt. %	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Mahanadi River	S3	Bulk									29.0	7.0	0.6	3.6	0.0	0.7	0.5	0.5	2.2	0.0	29.5	2.8	15.6	101.8	100.3	13.3	43.5
Mahanadi River	S3	Coarse Grain Size									31.5	5.7	0.4	2.7	0.1	0.7	0.3	0.9	2.8	0.0	17.0	2.1	8.6	58.6	46.7	17.8	25.6
NGHP Exp. 01	19	A	33	X	CC		16	24	253.56	6-10Ma	25.3	9.3	0.5	4.9	0.0	0.9	1.5	1.4	2.6	0.1	80.8	3.7	17.5	137.9	136.9	17.8	67.6
NGHP Exp. 01	19	A	36	X	CC		34	51	282.34	6-10Ma	24.7	8.3	0.4	4.0	0.0	2.7	1.3	1.4	2.3	0.1	72.9	3.1	16.9	129.8	140.3	16.3	65.7
NGHP Exp. 01	19	A	38	X	CC		22	33	301.82	6-10Ma	25.1	9.3	0.5	4.8	0.0	1.3	1.5	1.4	2.5	0.0	84.4	3.5	17.9	137.0	138.7	16.4	64.6
NGHP Exp. 01	16	A	1	H	1		38	40	0.38		21.4	8.1	0.7	7.1	0.1	1.9	1.9	2.4	1.8	0.1	49.5	2.1	24.4	189.3	154.4	28.8	77.1
NGHP Exp. 01	16	A	1	H	4		29	31	4.79		22.2	8.6	0.6	6.2	0.0	1.4	1.8	2.1	2.1	0.1	62.3	2.5	20.9	138.0	151.8	22.0	73.8
NGHP Exp. 01	16	A	2	H	2		4	6	8.54		16.7	6.0	0.4	4.3	0.0	11.2	1.6	1.7	1.6	0.1	44.6	1.8	15.0	104.9	112.3	17.2	62.4
NGHP Exp. 01	16	A	2	H	3		6	8	10.06		18.5	6.7	0.5	5.2	0.0	6.5	1.6	1.9	1.8	0.1	53.9	2.0	18.9	140.2	138.6	20.2	73.0
NGHP Exp. 01	16	A	2	H	4		98	100	12.48		18.4	7.0	0.5	5.7	0.0	6.3	1.6	1.8	1.8	0.1	59.8	2.1	17.1	124.9	136.4	18.7	75.9
NGHP Exp. 01	16	A	2	H	6		48	50	14.98		17.7	6.6	0.5	4.8	0.0	9.1	1.5	1.6	1.8	0.1	49.5	2.0	15.3	122.7	120.2	19.0	64.1
NGHP Exp. 01	16	A	3	H	2		4	6	18.04		21.4	8.3	0.6	6.0	0.0	2.8	1.7	2.0	2.0	0.1	74.2	2.3	21.7	158.1	159.2	21.4	74.8
NGHP Exp. 01	16	A	3	H	4		6	8	21.06		21.1	8.0	0.5	6.5	0.0	3.7	1.6	1.8	2.1	0.1	67.3	2.4	19.1	141.9	127.4	21.3	72.8
NGHP Exp. 01	16	A	3	H	7		49	51	25.49		22.2	8.4	0.7	6.3	0.0	2.3	1.8	1.7	2.2	0.1	62.7	2.5	21.4	179.0	152.9	26.4	73.3
353	U1444	A	6	H	4	W	108	110	51	0.2	33.0	6.6	0.4	3.1	0.1	2.0	1.2	1.7	2.3	0.1	31.6	3.0	10.7	68.5	67.0	10.9	30.4
353	U1444	A	12	H	3	W	60	62	98	0.4	19.3	7.4	0.4	5.1	0.4	7.5	1.6	1.4	2.0	0.1	63.2	2.6	18.6	122.6	131.5	43.1	146.1
353	U1444	A	15	X	4	W	81	83	123	1.2	22.1	8.3	0.5	5.0	0.2	5.5	1.7	1.3	2.3	0.1	80.1	2.7	17.9	153.9	141.0	31.1	123.2
353	U1444	A	17	X	4	W	14	16	142	2.6	23.8	7.5	0.4	4.4	0.1	4.7	1.5	1.2	2.3	0.0	72.8	3.4	14.5	159.0	133.6	31.3	156.6
353	U1444	A	19	X	4	W	20	22	161	3.5	22.1	8.8	0.5	5.2	0.1	4.1	1.7	1.5	2.1	0.1	85.7	2.9	18.3	166.3	151.2	29.7	113.2
353	U1444	A	24	F	3	W	51	53	208	3.65	34.7	5.0	0.4	2.8	0.1	2.1	0.9	1.6	1.8	0.1	24.8	2.6	9.3	52.7	46.9	7.6	19.6
353	U1444	A	31	X	3	W	74	76	267	3.75	26.2	10.0	0.5	4.9	0.1	0.9	1.9	1.3	3.4	0.1	82.3	4.3	17.2	148.4	131.4	18.7	52.9
353	U1444	A	33	X	4	W	90	92	288	5.0	18.9	7.4	0.4	4.3	0.1	10.4	1.2	1.2	1.7	0.0	70.8	2.5	16.5	121.9	116.7	28.0	89.5
353	U1445	A	1	H	5	W	23	25	6.23	0.04	19.7	6.9	0.4	4.1	0.1	8.0	1.9	1.9	2.1	0.1	56.4	2.4	13.0	112.0	100.4	24.0	69.0
353	U1445	A	2	H	6	W	40	42	14.8	0.11	21.5	8.4	0.4	5.2	0.1	2.9	1.8	3.0	2.3	0.1	76.8	3.0	15.7	109.9	108.2	22.0	70.7
353	U1445	A	3	H	4	W	30	32	21.2	0.16	17.1	6.4	0.4	3.9	0.1	11.1	1.6	1.4	2.1	0.1	46.0	2.1	12.3	98.4	97.1	25.7	66.3
353	U1445	A	4	H	4	W	115	117	31.57	0.24	24.4	9.3	0.5	5.3	0.1	1.2	1.7	1.8	2.7	0.0	89.9	3.3	19.5	145.2	123.6	23.4	77.3
353	U1445	A	5	H	4	W	105	107	40.86	0.31	21.3	7.7	0.4	4.6	0.2	4.9	1.8	1.7	2.3	0.1	66.7	2.5	16.3	121.1	116.6	27.2	82.0
353	U1445	A	6	H	4	W	77	79	50.02	0.39	21.4	7.4	0.5	4.3	0.2	6.7	1.7	1.5	2.4	0.1	58.7	2.4	14.1	128.3	101.5	38.3	82.0
353	U1445	A	7	H	4	W	98	100	59.49	0.47	22.5	8.8	0.5	5.0	0.1	2.6	1.8	1.5	2.4	0.1	78.9	2.9	18.8	148.5	125.2	26.8	89.0
353	U1445	A	9	H	4	W	110	112	77.54	0.62	21.9	8.2	0.4	5.0	0.1	4.8	1.8	1.4	2.4	0.1	67.8	2.6	17.3	137.4	118.8	27.4	97.3
353	U1445	A	11	H	4	W	61	63	96.82	0.79	23.5	9.0	0.5	5.2	0.1	3.0	1.7	1.5	2.7	0.1	84.5	3.3	18.2	144.3	114.9	22.2	74.5
353	U1445	A	13	H	4	W	69	71	116.31	0.98	23.7	9.0	0.5	5.0	0.1	2.4	1.7	1.6	2.5	0.0	81.0	3.0	18.1	132.0	116.9	21.4	72.6
353	U1445	A	15	H	4	W	76.5	78.5	135.755	1.17	23.3	8.5	0.5	5.3	0.1	2.7	1.8	1.8	2.5	0.1	79.4	2.9	17.3	143.7	112.1	32.7	102.9
353	U1445	A	17	H	4	W	133	135	155.24	1.36	24.3	9.0	0.5	4.9	0.1	1.0	1.9	2.1	2.6	0.1	89.7	3.2	18.7	153.4	121.5	24.6	90.0
353	U1445	A	19	H	4	W	78	80	173.35	1.55	21.6	7.4	0.4	4.5	0.1	4.8	1.7	1.6	2.0	0.1	75.6	2.5	15.7	110.9	118.8	20.4	75.4
353	U1445	A	20	H	4	W	90	92	183.13	1.66	24.1	8.7	0.5	5.3	0.1	1.5	1.7	1.6	2.4	0.1	87.7	2.9	19.4	143.9	128.0	24.0	88.5
353	U1445	A	21	H	4	W	43	45	192.36	1.79	24.0	8.8	0.5	5.0	0.1	1.6	1.7	1.7	2.5	0.1	86.4	2.9	17.5	129.9	116.7	24.0	74.8
353	U1445	A	22	H	4	W	88	90	201.6	1.92	24.4	8.1	0.4	4.8	0.1	1.4	1.6	1.7	2.3	0.1	80.8	2.7	17.0	116.2	110.9	20.2	79.8
353	U1445	A	24	H	4	W	35	37	219.72	2.14	22.7	9.1	0.5	5.4	0.1	1.5	1.6	2.0	2.4	0.1	92.1	3.1	18.4	141.5	125.4	32.4	96.0
353	U1445	A	25	X	4	W	38	40	229.21	2.24	23.5	9.6	0.5	5.3	0.1	1.2	1.7	1.2	2.4	0.1	95.9	3.1	19.3	141.6	124.2	19.4	79.3
353	U1445	A	28	X	5	W	94	96	260.1	2.45	23.9	9.6	0.5	5.0	0.1	0.6	1.6	1.6	2.4	0.0	105.8	3.4	19.3	147.7	130.1	24.3	100.6
353	U1445	A	31	X	4	W	43	45	287.37	2.68	25.7	7.9	0.4	4.6	0.1	1.1	1.4	1.9	2.2	0.0	81.4	3.0	16.3	121.2	118.4	25.0	79.3
353	U1445	A	34	X	4	W	66	68	316	2.93	23.2	8.8	0.5	4.6	0.1	2.6	1.7	1.8	2.3	0.1	88.6	3.1	18.6	151.6	120.0	27.2	81.7
353	U1445	A	37	X	4	W	35	37	338	3.12	23.4	8.5	0.5	5.4	0.1	1.8	1.5	1.7	2.1	0.1	89.5	2.9	17.4	147.2	131.9	24.0	97.4
353	U1445	A	41	X	2	W	7	9	369	3.35	25.2	7.5	0.4	4.6	0.1	2.1	1.4	1.6	2.2	0.1	80.2	3.1	16.1	121.4	112.0	19.1	93.1
353	U1445	A	46	X	4	W	11	13	412	3.64	25.3	9.2	0.5	4.8	0.1	1.1	1.6	1.7	2.7	0.0	93.1	3.7	18.3	137.6	114.8	18.6	62.5
353	U1445	A	52	X	4	W	53	55	460	3.93	25.2	9.9	0.5	4.8	0.2	0.9	1.7	1.3	3.2	0.0	84.6	4.0	18.8	144.1	117.4	22.5	57.8
353	U1445	A	56	X	4	W	94	96	493	4.14	24.9	9.1	0.5	4.7	0.1	1.8	1.5	2.0	2.7	0.0	91.3	3.2	17.1	132.9	120.5	19.6	71.4
353	U1445	A	61	X	4	W	78	80	533	4.45	25.0	9.2	0.4	4.6	0.1	2.0	1.7	1.3	3.1	0.0	82.3	3.9	17.2	132.9	104.4	21.5	66.6
353	U1445	A	66	X	4	W	57	59	573	4.89	24.2	8.4	0.4	5.0	0.1	2.6	1.4	1.3	2.0	0.1	83.0	3.0	18.4	151.7	124.0	22.7	88.4
353	U1445	A	71	X	4	W	132	134	620	5.54	25.5	8.4	0.4	5.1	0.1	1.6	1.2	1.3	2.0	0.0	84.1	2.9	17.2	133.8	112.2	23.6	98.5
353	U1445	A	75	X	4	W	83	85	655	6.09	24.8	8.5	0.4	4.9	0.1	1.7	1.5	1.4	2.2	0.0	76.7	3.2	18.5	154.6	128.9	19.8	78.4

500

Cu	Zn	Rb	Sr	Y	Zr	Nb	Mo	Sn	Sb	Cs	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Yb	Lu	Hf	Ta	Pb	Th	U
ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
34.0	64.8	142.2	121.5	52.3	164.5	22.9	0.5	3.3	0.5	5.8	729.6	67.6	127.1	13.9	50.0	9.8	1.9	8.4	1.2	7.1	1.3	3.6	3.5	0.5	4.3	2.5	29.9	35.9	3.7
20.5	42.0	149.9	152.5	19.7	131.0	14.9	0.5	2.0	0.3	3.8	946.9	37.5	73.1	7.1	25.8	5.0	1.3	4.2	0.6	3.6	0.7	1.9	1.9	0.3	3.2	1.0	29.7	16.1	2.0
56.4	119.2	169.2	124.5	24.9	78.4	16.4	1.4	4.4	1.2	12.7	532.3	36.7	77.5	8.1	29.5	5.9	1.2	5.2	0.8	4.4	0.9	2.4	2.3	0.4	2.4	1.1	30.9	18.6	3.6
58.5	117.6	147.5	195.0	25.8	71.5	14.9	1.0	3.6	1.0	10.5	439.8	34.7	69.7	7.9	28.7	5.8	1.2	5.2	0.8	4.5	0.9	2.5	2.4	0.4	2.3	1.0	25.7	15.3	4.5
50.5	111.0	145.1	130.5	23.1	70.4	15.5	1.6	4.2	1.0	12.1	515.1	35.3	72.7	8.0	29.2	5.8	1.2	4.8	0.7	4.1	0.8	2.2	2.2	0.3	2.4	1.1	27.3	16.9	4.0
97.7	95.3	91.2	116.6	23.7	93.2	13.8	1.0	2.7	0.8	5.4	199.5	25.5	55.8	6.2	23.6	5.2	1.2	4.9	0.8	4.4	0.9	2.3	2.2	0.3	3.0	0.9	15.2	9.7	2.6
65.9	99.4	112.0	123.1	20.2	85.6	14.7	1.0	3.0	0.9	6.8	270.1	27.3	58.6	6.4	23.7	5.0	1.1	4.4	0.7	3.7	0.8	2.0	1.9	0.3	2.5	0.9	18.2	12.7	3.9
51.5	76.6	86.6	1026.1	18.8	74.5	10.9	1.0	2.0	0.9	5.0	280.9	24.7	48.9	5.7	21.1	4.3	0.9	3.9	0.6	3.3	0.7	1.8	1.7	0.3	2.0	0.7	13.5	9.6	5.5
68.9	94.5	98.3	390.1	20.4	94.1	12.4	2.0	2.3	1.3	5.7	307.2	25.1	48.9	5.8	21.5	4.5	1.0	4.2	0.6	3.6	0.7	2.0	1.9	0.3	2.6	0.8	15.0	9.7	5.7
59.9	89.0	104.0	351.0	18.1	78.0	12.3	4.2	2.3	1.3	6.0	370.0	24.6	50.2	5.6	20.4	4.2	0.9	3.8	0.6	3.3	0.7	1.8	1.7	0.3	2.1	0.8	15.8	10.1	5.8
54.7	78.1	94.3	1028.5	18.9	80.6	12.7	0.9	2.5	0.9	5.7	286.9	29.2	54.8	6.4	23.2	4.6	1.0	4.1	0.6	3.4	0.7	1.8	1.7	0.3	2.2	0.8	15.9	10.3	4.8
74.4	102.5	110.7	189.1	19.6	90.2	13.3	0.9	2.7	0.9	6.5	343.5	26.4	55.4	6.2	22.7	4.7	1.1	4.3	0.7	3.7	0.8	2.0	1.9	0.3	2.5	0.8	17.7	11.2	5.1
63.2	96.2	121.6	228.4	20.2	84.4	14.0	1.5	2.9	1.1	7.0	405.5	29.2	59.9	6.7	24.7	5.0	1.1	4.4	0.7	3.8	0.8	2.0	1.9	0.3	2.4	0.9	18.9	13.1	5.0
81.6	107.4	119.4	162.7	22.2	87.6	15.8	1.0	3.2	0.9	6.7	312.8	33.2	68.6	7.5	27.5	5.6	1.2	5.0	0.8	4.2	0.8	2.2	2.0	0.3	2.7	1.0	19.5	13.7	3.7
17.3	55.6	138.5	171.6	25.6	22.2	14.0	0.4	4.1	0.4	6.8	406.7	44.3	86.4	9.8	35.3	7.0	1.2	5.8	0.9	4.7	0.9	2.4	2.2	0.3	0.7	1.1	20.8	18.0	2.3
130.5	140.2	120.4	403.4	25.8	74.0	11.9	0.9	2.8	1.9	7.8	857.1	30.0	65.9	7.0	25.8	5.5	1.2	5.0	0.8	4.3	0.9	2.4	2.3	0.4	2.0	0.8	30.4	12.0	2.3
108.4	146.1	134.6	307.9	21.7	69.6	12.6	0.6	3.3	1.5	8.8	846.5	29.9	61.5	6.9	25.1	5.1	1.1	4.6	0.7	3.9	0.8	2.1	2.1	0.3	1.9	0.9	23.8	12.0	2.6
87.3	138.7	140.4	283.5	24.9	82.4	14.2	1.2	3.5	2.1	9.2	735.4	30.0	75.3	7.2	27.1	5.9	1.2	5.1	0.8	4.3	0.9	2.4	2.3	0.4	2.3	1.0	26.1	13.9	3.0
149.3	143.9	81.0	290.0	27.6	78.0	13.3	0.6	3.2	2.5	8.3	851.1	28.7	63.0	6.9	26.2	5.8	1.3	5.4	0.8	4.8	1.0	2.6	2.5	0.4	2.2	0.9	30.1	12.0	2.1
9.6	47.1	104.1	130.4	34.2	31.6	15.1	0.3	3.9	0.5	5.7	316.0	72.3	118.3	14.8	53.6	10.4	1.5	8.2	1.2	6.2	1.2	3.1	2.9	0.5	1.0	1.3	16.6	30.8	4.1
51.0	109.3	181.9	134.3	25.6	60.4	18.7	0.4	6.1	1.1	15.6	547.2	33.0	79.4	8.0	28.9	6.0	1.2	5.3	0.8	4.5	0.9	2.5	2.4	0.4	1.8	1.4	41.5	18.1	3.1
226.1	143.9	113.7	635.9	25.6	67.4	11.1	0.4	2.9	1.2	7.7	647.7	30.0	59.5	6.9	25.4	5.4	1.2	5.0	0.8	4.3	0.9	2.4	2.3	0.4	1.8	0.8	31.9	11.6	2.0
44.5	96.2	124.6	543.8	17.8	63.4	13.6	1.2	3.1	1.6	8.3	430.8	29.0	60.9	6.8	25.3	5.0	1.0	4.1	0.6	3.3	0.7	1.8	1.6	0.2	1.8	0.9	24.9	13.2	3.9
42.8	103.3	150.8	201.7	19.1	65.8	14.5	1.8	3.8	1.1	10.4	576.5	33.4	72.7	7.8	28.5	5.5	1.1	4.5	0.7	3.7	0.7	1.9	1.8	0.3	1.9	1.0	23.9	16.4	3.7
44.7	84.1	97.1	1545.9	19.7	60.9	11.6	0.6	2.4	1.5	5.8	413.5	27.4	55.8	6.4	23.7	4.7	1.0	4.1	0.6	3.5	0.7	1.9	1.8	0.3	1.7	0.8	18.4	11.6	4.2
70.5	131.6	169.6	122.1	22.8	76.7	16.2	1.1	4.2	1.7	11.0	480.2	37.4	80.0	8.6	31.7	6.2	1.2	5.1	0.8	4.3	0.8	2.3	2.2	0.3	2.2	1.1	27.5	18.4	3.7
53.8	124.3	129.1	330.8	21.8	73.1	13.6	1.3	2.8	3.0	7.7	493.3	31.9	68.3	7.5	27.8	5.6	1.1	4.8	0.7	4.0	0.8	2.2	2.1	0.3	2.1	0.9	22.7	14.0	3.6
49.3	103.1	125.8	461.7	21.8	72.4	15.1	1.1	3.0	2.0	7.4	509.8	36.2	78.1	8.2	30.7	6.0	1.2	4.9	0.8	4.0	0.8	2.1	2.0	0.3	2.0	1.0	27.7	15.8	3.2
60.3	131.5	149.1	201.5	22.7	78.0	16.1	1.5	3.4	3.1	9.0	478.6	36.3	76.4	8.3	30.1	5.8	1.2	5.0	0.7	4.2	0.8	2.2	2.1	0.3	2.2	1.0	24.2	16.3	2.5
63.9	123.5	128.9	277.1	20.9	76.9	14.1	1.0	2.9	2.7	7.7	367.9	30.4	63.5	7.0	25.9	5.1	1.1	4.5	0.7	3.8	0.8	2.1	2.0	0.3	2.1	0.9	22.2	13.3	4.0
61.7	112.9	172.3	208.0	24.3	73.7	16.9	0.8	4.3	1.4	11.5	491.0	36.8	77.6	8.5	30.9	6.0	1.2	5.1	0.8	4.4	0.9	2.4	2.3	0.3	2.1	1.1	27.2	17.3	4.8
60.1	107.4	150.4	181.6	23.6	78.2	16.0	1.5	3.6	1.5	9.6	557.0	37.0	77.6	8.4	30.9	6.1	1.2	5.1	0.8	4.4	0.9	2.3	2.2	0.3	2.2	1.1	24.8	16.5	3.7
69.9	145.6	149.0	184.3	23.7	71.2	14.9	2.0	3.7	2.5	9.8	573.9	32.6	69.6	7.5	27.6	5.5	1.2	4.8	0.7	4.1	0.8	2.2	2.2	0.3	2.0	1.0	25.5	14.9	4.5
88.8	172.5	159.9	123.3	21.5	71.7	15.5	2.5	4.0	2.8	10.8	606.7	33.0	70.5	7.7	28.4	5.6	1.2	4.7	0.7	4.0	0.8	2.1	2.0	0.3	2.0	1.0	31.0	16.1	4.0
58.6	109.0	119.6	258.9	20.7	75.4	13.4	5.4	2.9	1.7	7.7	618.2	30.6	64.9	7.1	26.2	5.2	1.1	4.6	0.7	3.9	0.8	2.1	2.0	0.3	2.1	0.9	23.0	14.2	6.7
82.5	125.2	146.5	135.5	23.2	88.7	15.5	1.6	3.5	1.8	9.3	594.9	38.6	81.0	8.9	32.4	6.3	1.2	5.2	0.8	4.3	0.8	2.2	2.1	0.3	2.4	1.0	27.3	19.3	4.1
63.4	116.8	153.9	144.9	23.0	80.1	16.4	1.4	3.9	2.0	10.1	600.6	40.0	86.5	9.0	32.7	6.3	1.2	5.2	0.8	4.3	0.9	2.3	2.2	0.3	2.2	1.1	28.3	18.9	3.8
68.0	114.9	138.3	133.8	21.2	66.0	14.2	3.2	3.4	1.5	9.2	571.0	31.1	67.4	7.0	25.7	5.1	1.1	4.4	0.7	3.8	0.8	2.1	2.1	0.3	1.8	1.0	25.3	15.0	4.6
65.6	124.9	155.8	150.7	24.9	81.2	16.4	1.5	3.9	2.4	10.4	632.3	37.2	79.4	8.5	31.0	6.2	1.3	5.2	0.8	4.5	0.9	2.4	2.4	0.4	2.2	1.1	29.1	17.6	4.6
61.7	104.2	154.2	133.8	25.2	76.3	17.2	1.9	3.7	1.5	9.6	621.8	41.8	88.6	9.4	33.8	6.6	1.4	5.5	0.8	4.7	0.9	2.5	2.4	0.4	2.1	1.2	27.3	19.2	3.3
65.8	119.3	158.0	109.6	23.1	82.9	16.5	1.2	4.2	2.4	10.8	624.6	38.2	83.3	8.8	32.0	6.3	1.3	5.3	0.8	4.5	0.9	2.3	2.2	0.3	2.3	1.1	28.7	19.7	4.5
59.1	112.7	136.7	121.7	21.6	57.4	12.8	2.2	3.7	1.7	9.6	630.1	29.8	67.4	6.8	24.7	5.0	1.1	4.3	0.7	3.8	0.8	2.2	2.2	0.4	1.8	0.9	25.4	14.6	4.9
84.5	122.1	140.8	200.0	25.4	72.1	14.8	2.1	3.9	1.8	10.2	627.5	33.8	72.4	7.7	28.3	5.7	1.2	5.1	0.8	4.4	0.9	2.4	2.4	0.4	2.0	1.0	31.3	16.4	4.4
77.3	140.5	134.8	154.3	20.8	72.2	14.5	2.6	3.6	2.7	9.3	554.9	30.9	69.1	7.0	25.7	5.1	1.1	4.4	0.7	3.8	0.8	2.0	1.9	0.3	2.0	1.0	26.2	17.2	3.8
80.7	115.7	140.0	160.1	24.6	72.0	14.0	11.9	4.0	1.4	10.8	603.3	31.9	68.0	7.4	27.3	5.5	1.1	4.9	0.7	4.1	0.9	2.3	2.3	0.4	2.1	1.0	28.7	16.8	6.0
65.6	124.3	175.8	130.1	22.6	73.4	16.3	0.9	5.0	1.4	14.2	618.1	35.8	74.3	8.3	30.5	6.1	1.2	5.2	0.8	4.2	0.9	2.2	2.1	0.3	2.1	1.2	29.7	18.8	3.1
67.5	128.8	213.1	114.5	23.1	53.6	16.1	0.7	5.3	1.5	14.6	624.5	38.5	77.5	8.4	30.8	6.1	1.3	5.2	0.8	4.2	0.9	2.2	2.1	0.3	1.7	1.1	38.3	19.3	2.6
61.2	104.3	163.8	154.9	23.0	100.7	18.1	1.0	4.8	1.1	11.3	604.2	41.3	79.1	8.4	30.5	6.0	1.2	5.1	0.8	4.2	0.8	2.2	2.1	0.3	2.6	1.3	30.4	19.2	2.9
64.2	117.1	207.1	128.2	23.5	47.9	15.8	1.1	5.3	1.3	14.0	643.0	40.4	78.1	8.5	31.2	6.2	1.2	5.3	0.8	4.3	0.9	2.2	2.1	0.3	1.5	1.1	30.4	20.0	2.8
98.1	146.9	130.0	190.8	24.7	68.3	13.5	1.3	3.5	2.7	9.3	514.5	32.5	69.2	7.5	27.8	5.7	1.2	5.1	0.8	4.4	0.9	2.4	2.3	0.4	1.9	0.9	31.7	16.0	3.7
79.2	119.1	132.0	135.5	22.3	67.9	13.7	2.2	3.6	2.3	9.3	479.6	31.7	70.7	7.3	26.5	5.3	1.1	4.7	0.7	4.1	0.8	2.2	2.1	0.3	2.0	1.0	32.2	17.4	3.0
96.7	143.1	148.0	152.9	24.9	68.0	13.5	1.3	3.7	2.3	10.6	471.3	32.6	70.8	7.4	27.5	5.6	1.2	5.0	0.8	4.3	0.9	2.4	2.3	0.4	1.9	0.9	34.4	16.9	3.1

Supplemental Table S2

Exp	Site	Hole	Core	Type	Sect	W	Top	Bot	Depth	Age	$CaCO_3$	Total Organic C	Total Carbon	Total N, acidified	$\delta^{13}C$, TOC	Color
									mbsf, CSF-A	Ma	wt.%	wt.%	wt.%	wt.%	per mil	relative to pair
353	U1445	A	1	H	1	W	41	43	0.41	0.00	1.93	1.11	1.34	0.11	-20.02	Light
353	U1445	A	1	H	1	W	93	95	0.93	0.01	3.61	1.39	1.82	0.14	-20.30	Dark
353	U1445	A	1	H	5	W	23	25	6.23	0.04	26.81	1.64	4.86	0.16	-17.23	No Pair
353	U1445	A	4	H	1	W	100	102	26.9	0.20	11.04	1.59	2.91	0.16	-17.90	Dark
353	U1445	A	4	H	2	W	120	122	28.6	0.21	10.62	0.69	1.96	0.08	-18.22	Light
353	U1445	A	7	H	4	W	92	94	59.43	0.47	9.35	1.41	2.54	0.13	-16.93	Dark
353	U1445	A	7	H	4	W	112	114	59.63	0.47	7.02	1.15	1.99	0.12	-17.79	Light
353	U1445	A	10	H	1	W	95	97	83.85	0.68	2.88	0.94	1.29	0.12	-19.23	Light
353	U1445	A	10	H	3	W	41	43	85.88	0.70	5.42	1.51	2.16	0.13	-18.98	Dark
353	U1445	A	11	H	4	W	61	63	96.82	0.80	9.21	0.72	1.83	0.08	-18.33	No Pair
353	U1445	A	12	H	8	W	37	39	111.22	0.93	3.83	1.43	1.89	0.15	-18.52	Dark
353	U1445	A	13	H	1	W	88	90	112.28	0.94	4.09	1.08	1.57	0.12	-18.56	Light
353	U1445	A	16	H	1	W	70	72	140.6	1.22	3.07	1.02	1.38	0.11	-18.31	Light
353	U1445	A	16	H	2	W	65	67	141.81	1.23	1.72	1.38	1.58	0.16	-19.28	Dark
353	U1445	A	19	H	1	W	70	72	169.1	1.51	2.68	1.06	1.38	0.12	-18.89	Light
353	U1445	A	19	H	4	W	78	80	173.35	1.55	11.80	2.24	3.66	0.21	-17.88	Dark
353	U1445	A	22	H	1	W	30	32	197.2	1.86	2.39	1.84	2.12	0.19	-19.67	Light
353	U1445	A	22	H	2	W	93	95	199.33	1.89	4.86	1.90	2.48	0.21	-18.19	Dark
353	U1445	A	22	H	4	W	88	90	201.6	1.92	4.32	1.96	2.48	0.20	-17.90	No Pair
353	U1445	A	25	X	1	W	41	43	225.51	2.20	4.95	1.86	2.45	0.20	-18.54	Dark
353	U1445	A	25	X	3	W	12	14	227.5	2.22	5.33	1.15	1.79	0.12	-17.13	Light
353	U1445	A	28	X	1	W	104	106	255.24	2.42	3.83	2.16	2.62	0.22	-17.39	Dark
353	U1445	A	28	X	1	W	138	140	255.58	2.42	3.74	1.89	2.34	0.17	-16.52	Light
353	U1445	A	31	X	1	W	59	61	283.89	2.65	1.97	1.50	1.74	0.17	-18.48	Light
353	U1445	A	31	X	3	W	40	42	286.41	2.67	7.76	1.55	2.48	0.15	-18.49	Dark
353	U1445	A	34	X	1	W	19	21	310.89	2.89	13.81	2.08	3.73	0.20	-19.18	Light
353	U1445	A	34	X	2	W	53	55	312.64	2.91	1.98	2.60	2.84	0.23	-18.63	Dark
353	U1445	A	37	X	4	W	82	84	338.75	3.12	3.58	1.21	1.64	0.15	-20.39	Light
353	U1445	A	37	X	5	W	53	55	339.97	3.13	3.50	1.44	1.86	0.16	-19.84	Dark
353	U1445	A	41	X	1	W	117	119	368.57	3.35	3.29	2.73	3.13	0.23	-19.09	Light
353	U1445	A	41	X	2	W	11	13	368.93	3.35	3.63	3.32	3.76	0.26	-18.51	Dark
353	U1445	A	41	X	3	W	88	90	371.22	3.37						No Pair
353	U1445	A	44	X	4	W	61	63	396.06	3.53	1.57	0.61	0.80	0.08	-19.83	Light
353	U1445	A	44	X	4	W	136	138	396.81	3.53	3.88	1.01	1.48	0.12	-20.15	Dark
353	U1445	A	47	X	5	W	84	86	422.01	3.70	8.07	0.67	1.64	0.10	-20.63	Light
353	U1445	A	48	X	1	W	8	10	423.48	3.71	5.04	1.33	1.93	0.15	-19.42	Dark
353	U1445	A	51	X	4	W	74	76	451.55	3.87	6.88	0.80	1.62	0.10	-21.47	Dark
353	U1445	A	51	X	6	W	135	137	454.63	3.89	3.85	0.39	0.85	0.06	-21.64	Light
353	U1445	A	51	X	8	W	6	8	455.77	3.90	3.26	0.39	0.78	0.07	-21.04	No Pair
353	U1445	A	55	X	4	W	15	17	482.78	4.07	4.24	1.08	1.59	0.13	-19.68	Dark
353	U1445	A	55	X	5	W	69	71	484.82	4.08	3.52	0.39	0.81	0.06	-19.74	Light
353	U1445	A	59	X	2	W	57	59	512.37	4.27	3.80	1.11	1.57	0.14	-19.79	Dark
353	U1445	A	59	X	3	W	12	14	513.43	4.28	7.32	0.88	1.76	0.11	-19.70	Light
353	U1445	A	62	X	4	W	133	135	541.21	4.53	8.94	0.98	2.05	0.11	-20.02	Dark
353	U1445	A	62	X	5	W	68	70	542.06	4.53	4.47	0.42	0.96	0.07	-20.49	Light
353	U1445	A	66	X	1	W	106	108	568.46	4.84	4.17	0.90	1.40	0.11	-19.92	Dark
353	U1445	A	66	X	2	W	90	92	569.81	4.86	7.32	0.40	1.28	0.06	-20.45	Light
353	U1445	A	66	X	4	W	60	62	572.53	4.89	4.03	0.98	1.47	0.12	-19.13	No Pair
353	U1445	A	69	X	1	W	25	27	595.05	5.19	3.97	0.66	1.14	0.09	-20.86	Dark
353	U1445	A	69	X	1	W	148	150	596.28	5.20	3.88	0.39	0.85	0.07	-21.24	Light
353	U1445	A	71	X	7	W	63	65	623.54	5.59	6.71	0.78	1.58	0.09	-20.97	Light
353	U1445	A	72	X	1	W	90	92	624.8	5.61	9.26	0.93	2.04	0.11	-19.61	Dark
353	U1445	A	75	X	4	W	62	64	654.8	6.08	5.08	1.57	2.18	0.15	-20.28	Dark
353	U1445	A	75	X	4	W	121	123	655.39	6.09	1.91	0.93	1.16	0.11	-20.05	Light
353	U1445	A	76	X	4	W	79	81	664.72	6.25	3.35	1.38	1.78	0.15	-20.57	No Pair
353	U1445	A	76	X	5	W	28	29	665.33	6.26	5.19	0.54	1.16	0.08	-21.92	Light
353	U1445	A	76	X	5	W	73	75	665.78	6.26	3.66	0.72	1.16	0.09	-21.42	Dark

Supplemental Table S3

Exp	Site	Hole	Core	Type	Sect	W	Top	Bot	Depth	Age	δD, C26	std δD, C26	δD, C28	std δD, C28	δD, C30	std δD, C30	δD, C30, corrected for C3/C4		$\delta^{13}C$, C26	std $\delta^{13}C$, C26	$\delta^{13}C$, C28	std $\delta^{13}C$, C28	$\delta^{13}C$, C30	std $\delta^{13}C$, C30
									mbsf, CSF-A	Ma	‰	‰	‰	‰	‰	‰	‰		‰	‰	‰	‰	‰	‰
353	U1445	A	1	H	1	W	41	43	0.41	0.00	-150.17	0.47	-155.92	1.98	-155.03	1.03	-169.41		-27.08	0.07	-28.38	0.07	-28.11	0.02
353	U1445	A	1	H	1	W	93	95	0.93	0.01	-151.40	0.29	-160.72	3.84	-149.50	0.40	-165.14		-26.83	0.17	-28.24	0.09	-28.70	0.14
353	U1445	A	1	H	5	W	23	25	6.23	0.04	-140.92	1.86	-142.35	3.13	-140.21	1.00	-144.19		-23.85	0.05	-22.90	0.13	-23.26	0.13
353	U1445	A	4	H	1	W	100	102	26.9	0.20	-139.07	0.89	-146.86	4.27	-145.96	3.03	-150.63		-24.71	0.07	-24.38	0.01	-23.58	0.03
353	U1445	A	4	H	2	W	120	122	28.6	0.21	-133.30	1.55	-145.10	4.68	-131.31	2.10	-138.82		-24.51	0.10	-24.31	0.13	-24.91	0.02
353	U1445	A	7	H	4	W	92	94	59.43	0.47	-136.88	1.81	-144.80	1.63	-141.93	0.55	-146.91		-24.71	0.08	-24.54	0.01	-23.73	0.02
353	U1445	A	7	H	4	W	112	114	59.63	0.47	-130.31	2.28	-139.93	2.17	-130.77	3.42	-135.70		-23.74	0.02	-23.97	0.08	-23.70	0.00
353	U1445	A	10	H	1	W	95	97	83.85	0.68	-150.71	1.78	-153.63	3.44	-157.44	3.27	-169.58		-25.67	0.07	-26.41	0.06	-27.06	0.03
353	U1445	A	10	H	3	W	41	43	85.88	0.70	-147.34	1.49	-154.28	1.96	-148.02	6.34	-161.54		-26.64	0.04	-27.07	0.09	-27.71	0.04
353	U1445	A	11	H	4	W	61	63	96.82	0.80	-127.76	3.11	-134.90	3.88	-125.57	4.38	-134.81		-24.08	0.06	-24.34	0.01	-25.71	0.20
353	U1445	A	12	H	8	W	37	39	111.22	0.93	-147.62	1.31	-156.82	1.53	-162.58	1.48	-171.16		-25.48	0.03	-25.37	0.07	-25.41	0.02
353	U1445	A	13	H	1	W	88	90	112.28	0.94	-135.90	0.30	-143.82	0.98	-135.54	1.09	-145.62		-24.98	0.01	-25.08	0.05	-26.11	0.01
353	U1445	A	16	H	1	W	70	72	140.6	1.22	-141.12	1.61	-151.59	1.28	-149.31	0.56	-160.13		-25.50	0.08	-25.66	0.06	-26.45	0.05
353	U1445	A	16	H	2	W	65	67	141.81	1.23	-146.11	2.84	-151.92	3.84	-157.18	5.61	-170.43		-25.77	0.02	-26.62	0.09	-27.58	0.07
353	U1445	A	19	H	1	W	70	72	169.1	1.51	-147.56	2.27	-151.72	2.80	-158.65	2.75	-171.67		-26.15	0.02	-27.37	0.04	-27.48	0.07
353	U1445	A	19	H	4	W	78	80	173.35	1.55	-135.88	1.11	-141.07	3.22	-140.86	5.66	-147.25		-24.01	0.05	-24.28	0.08	-24.39	0.05
353	U1445	A	22	H	1	W	30	32	197.2	1.86	-140.37	2.29	-144.30	2.00	-153.81	7.42	-162.45		-24.62	0.03	-25.42	0.01	-25.43	0.05
353	U1445	A	22	H	2	W	93	95	199.33	1.89	-142.77	1.08	-138.88	0.48	-147.76	6.32	-151.85		-23.49	0.01	-23.68	0.03	-23.30	0.13
353	U1445	A	22	H	4	W	88	90	201.6	1.92	-144.46	1.83	-142.60	0.09	-153.73	0.89	-159.45		-23.38	0.07	-23.60	0.05	-24.07	0.06
353	U1445	A	25	X	1	W	41	43	225.51	2.20	-140.35	2.15	-147.95	2.71	-164.41	4.28	-169.51		-23.37	0.08	-23.41	0.04	-23.78	0.01
353	U1445	A	25	X	3	W	12	14	227.5	2.22	-143.70	2.91	-145.87	2.77	-148.54	3.50	-156.02		-23.65	0.18	-24.04	0.03	-24.89	0.01
353	U1445	A	28	X	1	W	104	106	255.24	2.42	-137.31	3.14	-141.84	5.34	-155.52	2.66	-159.37		-23.86	0.34	-23.20	0.27	-23.20	0.37
353	U1445	A	28	X	1	W	138	140	255.58	2.42	-147.89	1.56	-150.50	2.61	-157.96	2.09	-161.66		-23.31	0.10	-22.91	0.14	-23.13	0.20
353	U1445	A	31	X	1	W	59	61	283.89	2.65	-145.64	1.43	-149.66	2.00	-160.18	9.28	-166.67		-23.74	0.10	-24.02	0.10	-24.43	0.01
353	U1445	A	31	X	3	W	40	42	286.41	2.67	-144.12	2.10	-147.41	2.12	-146.73	11.51	-156.24		-25.64	0.12	-25.44	0.10	-25.84	0.03
353	U1445	A	34	X	1	W	19	21	310.89	2.89	-148.41	1.63	-153.70	1.67	-156.64	0.38	-167.76		-25.47	0.11	-25.94	0.19	-26.59	0.10
353	U1445	A	34	X	2	W	53	55	312.64	2.91	-144.08	3.31	-152.07	0.88	-157.56	3.47	-166.16		-24.12	0.14	-24.56	0.05	-25.41	0.04
353	U1445	A	37	X	4	W	82	84	338.75	3.12	-148.41	3.48	-153.44	0.77	-160.91	1.78	-172.86		-24.04	0.06	-25.51	0.08	-26.98	0.07
353	U1445	A	37	X	5	W	53	55	339.97	3.13	-149.99	4.50	-158.97	2.58	-168.65	2.70	-181.15		-24.77	0.03	-25.86	0.05	-27.24	0.11
353	U1445	A	41	X	1	W	117	119	368.57	3.35	-130.38	2.33	-149.83	0.46	-156.89	0.97	-162.86		-23.03	0.05	-24.06	0.04	-24.19	0.02
353	U1445	A	41	X	2	W	11	13	368.93	3.35	-139.32	0.67	-156.17	1.43	-152.08	1.58	-158.14		-23.64	0.07	-24.55	0.04	-24.23	0.02
353	U1445	A	41	X	3	W	88	90	371.22	3.37	-144.62	0.58	-146.70	0.70	-152.29	1.40	-161.82		-23.63	0.04	-24.50	0.04	-25.85	0.07
353	U1445	A	44	X	4	W	61	63	396.06	3.53	NaN	NaN	NaN	NaN		NaN	NaN		-25.95	0.04	-26.60	0.05	-27.58	0.02
353	U1445	A	44	X	4	W	136	138	396.81	3.53	-139.38	2.98	-145.48	4.56	-155.21	2.19	-170.74		-25.58	0.03	-26.91	0.01	-28.65	0.01
353	U1445	A	47	X	5	W	84	86	422.01	3.70	-150.43	1.45	-156.71	2.48	-166.92	3.31	-183.48		-26.45	0.10	-28.20	0.10	-29.13	0.17
353	U1445	A	48	X	1	W	8	10	423.48	3.71	-138.33	2.12	-149.08	0.62	-158.99	2.02	-171.93		-26.00	0.26	-26.48	0.09	-27.44	0.20
353	U1445	A	51	X	4	W	74	76	451.55	3.87	-162.96	0.27	-164.27	1.81	-171.75	2.84	-190.83		-27.04	0.01	-28.80	0.01	-30.30	0.03
353	U1445	A	51	X	6	W	135	137	454.63	3.89	-165.26	14.07	-163.82	13.27	-163.70	19.03	NaN		NaN	NaN	NaN	NaN		
353	U1445	A	51	X	8	W	6	8	455.77	3.90	-162.97	1.10	-162.79	3.11	-165.20	3.11	NaN		NaN	NaN	NaN	NaN		
353	U1445	A	55	X	4	W	15	17	482.78	4.07	-142.12	1.73	-145.58	0.82	-153.10	1.89	-167.83		-25.07	0.10	-26.42	0.06	-28.28	0.11
353	U1445	A	55	X	5	W	69	71	484.82	4.08	-142.86	2.88	-148.88	0.44	-146.15	10.15	NaN		NaN	NaN	NaN	NaN		
353	U1445	A	59	X	2	W	57	59	512.37	4.27	-147.45	1.68	-152.01	0.41	-159.10	0.94	NaN		NaN	NaN	NaN	NaN		
353	U1445	A	59	X	3	W	12	14	513.43	4.28	-143.37	1.79	-149.31	3.93	-152.51	1.67	-161.85		-24.42	0.09	-25.76	0.04	-28.05	0.25
353	U1445	A	62	X	4	W	133	135	541.21	4.53	-148.85	2.70	-155.44	1.35	-161.79	2.45	-171.14		-25.11	0.20	-25.76	0.09	-27.71	0.21
353	U1445	A	62	X	5	W	68	70	542.06	4.53	-161.67	0.32	-169.56	0.35	-170.58	2.48	NaN		NaN	NaN	NaN	NaN		
353	U1445	A	66	X	1	W	106	108	568.46	4.84	-147.44	1.54	-154.09	1.73	-154.76	3.24	-162.58		-24.19	0.05	-25.05	0.11	-27.14	0.07
353	U1445	A	66	X	2	W	90	92	569.81	4.86	-157.19	2.82	-171.30	2.17	-176.60	3.23	NaN		NaN	NaN	NaN	NaN		
353	U1445	A	66	X	4	W	60	62	572.53	4.89	-135.94	5.40	-146.23	1.63	-147.18	1.60	-154.27		-23.61	0.03	-24.71	0.03	-27.04	0.02
353	U1445	A	69	X	1	W	25	27	595.05	5.19	-150.94	0.59	-152.54	1.14	-153.48	1.51	-166.43		-24.72	0.07	-27.44	0.12	-29.70	0.19
353	U1445	A	69	X	1	W	148	150	596.28	5.20	-167.20	0.90	-171.72	2.31	-171.19	2.02	NaN		NaN	NaN	NaN	NaN		
353	U1445	A	71	X	7	W	63	65	623.54	5.59	-157.86	0.48	-162.62	3.41	-165.99	2.88	-179.12		-26.80	0.14	-27.53	0.00	-29.99	0.05
353	U1445	A	72	X	1	W	90	92	624.8	5.61	-146.94	2.22	-155.70	0.66	-161.97	3.54	-168.99		-24.75	0.02	-24.68	0.08	-26.45	0.01
353	U1445	A	75	X	4	W	62	64	654.8	6.08	-146.12	2.92	-153.16	3.26	-160.10	0.56	-168.11		-24.81	0.17	-25.13	0.19	-27.06	0.08
353	U1445	A	75	X	4	W	121	123	655.39	6.09	-154.79	2.43	-159.61	1.27	-171.84	1.94	-179.67		-25.30	0.07	-25.05	0.02	-26.57	0.05
353	U1445	A	76	X	4	W	79	81	664.72	6.25	-150.35	1.60	-153.19	1.42	-160.04	3.20	-169.67		-25.68	0.06	-25.89	0.02	-28.22	0.09
353	U1445	A	76	X	5	W	28	29	665.33	6.26	-152.77	3.70	-162.05	3.46	-163.40	0.64	-176.49		-26.51	0.14	-27.51	0.21	-29.77	0.08
353	U1445	A	76	X	5	W	73	75	665.78	6.26	-145.95	1.05	-155.23	2.15	-156.25	1.77	-173.44		-28.24	0.01	-29.42	0.07	-31.65	0.06

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