Table 1. A. *G. ruber* stable isotopic data. *N. dutertrei* data shown in italics have been corrected according to the *G. ruber* data, Hole 769A (see text). B. Bulk carbonate data from the upper 65 m of sediment in Hole 769A. d 13 C and d 18 O are $\delta^{13}C$ and $\delta^{18}O$, respectively.

Site 769A			
Age ka	Depth (m)	d 13 C (o/oo) PDB	d 18 O (o/oo) PDB
2.3	0.25	1.42	-2.61
2.8	0.30	1.44	-2.61
3.2	0.35	1.39	-2.48
3.7	0.40	1.39	-2.56
4.2	0.45	1.29	-2.61
4.6	0.50	1.19	-2.56
5.1	0.55	1.37	-2.58
5.6	0.60	1.36	-2.49
6.0	0.65	1.08	-2.41
6.5	0.70	1.24	-2.53
6.9	0.75	1.18	-2.41
7.4	0.80	1.20	-2.49
7.9	0.85	0.97	-2.43
8.3	0.90	1.02	-2.49
8.8	0.95	1.05	-2.23
9.3	1.00	0.72	-2.55
9.7	1.05	0.70	-2.45
10.0	1.10	0.67	-2.02
10.2	1.14	0.73	-1.99
10.6	1.20	0.68	-1.95
10.8	1.24	0.85	-1.79
11.1	1.30	0.83	-2.11
11.4	1.35	0.84	-2.12
11.8	1.41	0.72	-1.96
12.0	1.45	0.72	-1.92
12.7	1.55	0.85	-1.67
13.0	1.60	0.73	-1.28
13.3	1.65	1.03	-1.33
13.6	1.70	0.82	-1.42
13.9	1.75	0.60	-1.50
14.2	1.80	0.82	-1.42
14.6	1.85	0.83	-1.25
15.2	1.96	0.95	-1.38
15.5	2.00	1.02	-1.46
15.8	2.05	1.05	-1.62
16.1	2.10	0.85	-1.65
16.4	2.15	1.02	-1.56
16.8	2.20	0.87	-1.46
17.1	2.25	1.01	-1.57
17.4	2.30	0.92	-1.36
17.7	2.35	0.95	-1.37
18.0	2.40	0.97	-1.55
18.3	2.45	0.89	-1.62
19.1	2.50	1.03	-1.59
19.9	2.55	1.27	-1.82

Table 1A (continued).

	20.7	2.60	0.80	-1.94
	21.5	2.65	0.96	-1.73
	22.4	2.70	0.91	-1.78
	23.2	2.75	1.03	-1.89
	24.0	2.80	1.03	-1.96
	24.8	2.85	1.09	-2.02
	25.6	2.90	0.97	-1.99
	26.4	2.95	0.94	-1.93
	27.0	2.99	0.97	-1.99
	28.8	3.10	0.80	-2.16
	30.4	3.20	1.08	-1.93
	32.0	3.30	1.00	-1.80
	33.6	3.40	0.97	-2.00
	35.2	3.50	1.28	-2.00
	36.8	3.60	1.04	-1.80
	38.5	3.70	1.04	-1.81
	40.1	3.80	0.92	-1.98
	41.7	3.90	0.96	-2.01
	43.3	4.00	1.30	-1.98
	44.9	4.10	0.89	-2.05
	46.5	4.20	0.94	-2.03
	48.1	4.30	1.01	-2.20
	49.7	4.40	0.83	-2.12
	52.8	4.59	1.05	-2.11
	56.0	4.79	0.94	-2.27
	59.0	4.99	0.65	-2.00
	62.0	5.19	0.55	-1.99
	65.0	5.39	0.71	-1.63
	68.0	5.59	1.03	-1.79
	74.5	6.02	1.03	-2.00
	77.0	6.19	0.83	-2.06
	80.0	6.39	1.36	-2.20
	84.0	6.59	1.13	-2.09
	88.0	6.79	1.17	-1.97
	92.0	6.99	1.23	-1.80
	96.0	7.19	1.15	-1.96
	100.0	7.39	1.24	-2.17
	103.5	7.60	1.10	-2.08
	113.7	8.22	0.83	-2.10
	120.0	8.60	0.97	-2.61
	122.4	8.80	0.83	-2.38
	124.8	9.00	0.73	-2.20
	127.2	9.20	0.69	-2.07
	129.6	9.40	0.75	-1.70
	132.0	9.60	0.30	-1.50
	133.7	9.80	0.52	-1.43
	136.3	10.10	0.71	-1.46
	138.0	10.30	0.74	-1.45

Table 1A (continued).

	139.8	10.50	0.52	-1.40
	141.5	10.70	0.86	-1.45
	143.2	10.90	0.81	-1.28
	145.0	11.10	0.85	-1.53
	146.7	11.30	0.56	-1.50
	149.3	11.60	0.63	-1.47
	151.0	11.80	0.74	-1.36
	153.5	12.00	0.57	-1.55
	156.1	12.20	0.83	-1.62
	158.6	12.40	0.58	-1.55
	161.1	12.60	0.42	-1.92
	163.7	12.80	0.72	-2.05
	167.5	13.10	0.79	-2.10
	170.0	13.30	0.83	-2.13
	173.5	13.50	0.70	-1.86
	177.0	13.70	0.57	-1.77
	180.5	13.90	0.72	-1.64
	184.0	14.10	0.61	-1.57
	186.7	14.30	0.83	-2.13
	190.7	14.60	0.59	-2.02
	193.3	14.80	0.50	-2.20
	196.0	15.00	0.83	-2.33
	197.8	15.20	1.06	-2.31
	199.6	15.40	1.27	-2.19
	201.5	15.60	1.33	-2.27
	203.3	15.80	1.17	-2.17
	206.0	16.10	1.16	-1.88
	208.2	16.30	1.35	-2.05
	210.4	16.50	1.11	-2.11
	212.6	16.70	1.11	-2.39
	214.8	16.90	1.06	-2.20
	217.0	17.10	0.96	-2.49
	218.4	17.30	1.07	-2.13
	220.6	17.60	0.78	-1.90
	222.0	17.80	0.78	-1.83
	223.4	18.00	0.59	-2.14
	224.1	18.10	0.72	-2.03
	224.9	18.20	0.73	-1.63
	225.8	18.33	0.63	-1.38
	227.0	18.50	0.65	-1.24
	229.2	18.70	0.84	-1.68
	231.3	18.88	1.12	-1.93
	233.7	19.10	1.22	-2.11
	236.0	19.30	0.95	-2.13
	238.7	19.50	0.70	-2.08
	241.3	19.70	0.58	-1.64
	243.9	19.89	0.98	-1.57
	247.1	20.13	0.78	-1.63

Table 1A (continued).

	249.3	20.30	0.62	-1.52
	252.0	20.50	0.68	-1.56
	254.7	20.70	0.62	-1.42
	257.2	20.89	0.72	-1.74
	260.0	21.10	0.41	-1.88
	262.5	21.29	0.39	-1.85
	265.3	21.50	0.49	-1.83
	267.9	21.70	0.40	-1.83
	270.5	21.90	0.41	-1.74
	272.7	22.06	0.43	-1.46
	278.5	22.50	0.90	-1.38
	281.1	22.70	0.89	-1.58
	283.6	22.89	1.08	-1.92
	286.4	23.10	0.96	-1.83
	289.0	23.30	0.99	-2.29
	290.9	23.50	0.87	-2.09
	292.8	23.70	0.86	-1.99
	294.3	23.86	0.96	-2.10
	296.6	24.10	1.08	-1.64
	298.6	24.31	1.02	-1.83
	300.5	24.50	0.66	-1.87
	302.4	24.70	0.91	-1.59
	304.3	24.90	1.08	-1.96
	306.2	25.10	0.97	-2.14
	308.1	25.30	0.70	-1.83
	310.0	25.50	0.89	-2.26
	312.5	25.70	0.96	-2.06
	314.9	25.89	1.09	-2.07
	317.5	26.10	1.16	-1.70
	320.0	26.30	1.23	-1.95
	322.5	26.50	1.05	-2.26
	325.0	26.70	1.09	-2.40
	327.2	26.88	1.18	-2.29
	330.0	27.10	0.96	-2.39
	332.9	27.30	0.65	-2.21
	334.3	27.40	0.51	-2.17
	335.7	27.50	0.74	-1.61
	337.1	27.60	0.67	-1.34
	340.0	27.80	0.74	-1.13
	340.9	27.90	0.85	-1.75
	341.7	28.00	1.09	-1.65
	343.5	28.20	1.13	-1.87
	345.3	28.40	0.73	-1.74
	347.0	28.60	0.97	-1.98
	348.7	28.80	0.67	-1.73
	350.5	29.00	0.83	-1.62
	352.2	29.20	0.90	-1.70
	354.0	29.40	0.79	-1.54

Table 1A (continued).

	355.6	29.58	0.88	-1.75
	357.5	29.80	1.09	-1.66
	359.8	30.06	1.21	-1.87
	361.0	30.20	1.27	-1.87
	362.7	30.39	0.90	-2.04
	364.5	30.60	1.02	-1.93
	366.3	30.80	0.85	-1.81
	368.0	31.00	0.83	-2.17
	369.7	31.20	1.34	-1.75
	371.5	*31.40*	*1.08*	*-1.84*
	373.2	*31.60*	*0.75*	*-1.31*
	375.0	31.80	0.51	-1.27
	377.0	32.00	0.98	-1.96
	379.0	*32.20*	*1.15*	*-1.96*
	381.0	32.40	0.84	-2.39
	382.9	*32.59*	*1.23*	*-1.88*
	385.0	*32.80*	*1.24*	*-1.57*
	387.0	33.00		
	389.0	33.20		
	390.8	33.38		
	393.0	33.60	1.03	-1.59
	395.0	33.80	0.75	-1.83
	397.0	34.00	0.56	-2.13
	399.0	34.20	0.66	-2.04
	401.0	34.40	0.63	-1.83
	403.0	*34.60*	*1.08*	*-2.07*
	405.0	*34.80*	*1.02*	*-2.19*
	414.7	35.00	0.70	-2.11
	424.3	35.20	0.20	-1.80
	434.0	35.40	0.43	-1.25
	436.7	35.59	0.62	-1.23
	439.8	35.80	0.46	-1.32
	442.7	36.00	0.67	-1.23
	445.6	36.20	0.70	-1.34
	448.3	36.39	0.70	-1.25
	451.4	36.60	0.82	-1.36
	454.3	36.80	0.82	-1.39
	456.9	36.98	0.76	-1.46
	458.6	37.10	0.46	-1.51
	461.5	*37.30*	*0.93*	*-1.50*
	464.4	*37.50*	*0.53*	*-1.65*
	467.3	37.70	0.51	-2.00
	470.2	*37.90*	*1.30*	*-1.75*
	473.1	*38.10*	*0.89*	*-1.60*
	476.0	38.30	1.26	-1.68
	481.7	*38.70*	*1.43*	*-1.88*
	484.6	*38.90*	*1.30*	*-2.15*
	487.5	*39.10*	*1.36*	*-2.03*

Table 1A (continued).

	490.4	39.30	1.43	-1.92
	493.3	39.50	1.18	-1.75
	496.2	39.70	1.39	-1.51
	499.0	39.89	1.22	-1.71
	502.0	40.10	1.25	-2.30
	503.0	*40.30*	*1.38*	*-1.71*
	504.1	40.50	0.96	-1.71
	505.1	40.70	0.87	-1.54
	506.2	40.90	1.05	[illegible]
	507.2	41.10	1.25	-1.68
	508.3	*41.30*	*1.15*	*-1.87*
	509.3	41.50		
	510.4	41.70		
	511.4	41.90		
	512.5	42.10		
	513.5	*42.30*	*1.33*	*-1.65*
	514.5	*42.50*	*1.29*	*-1.93*
	515.6	42.70	1.58	-1.97
	516.6	*42.90*	*1.32*	*-1.86*
	517.7	43.10	1.42	-1.80
	518.7	*43.30*	*0.80*	*-1.85*
	520.0	*43.54*	*0.81*	*-1.61*
	521.9	*43.90*		
	522.9	*44.10*		
	524.0	44.30	1.05	-2.33
	525.0	44.50	1.34	-2.40
	527.8	44.70	0.94	-2.12
	531.1	44.94	1.11	-2.09
	533.3	45.10	1.15	-2.04
	536.1	45.30	1.24	-1.74
	541.7	45.70	1.28	-1.82
	544.3	45.89	0.91	-1.87
	547.2	46.10	0.92	-2.24
	550.0	46.30	1.11	-2.14
	551.8	46.50	0.90	-2.07
	553.6	46.70	0.82	-2.18
	555.4	46.90	0.77	-2.02
	557.1	47.10	0.75	-1.81
	558.9	47.30	0.80	-1.82
	560.7	47.50	0.76	-1.86
	562.5	47.70	0.81	-1.99
	564.2	47.89	0.72	-2.01
	566.1	48.10	0.80	-1.99
	567.9	48.30	0.95	-1.83
	569.6	48.50	0.79	-2.00
	571.4	48.70	1.09	-2.27
	573.2	48.90	0.98	-2.18
	575.0	49.10	1.00	-2.37

Table 1A (continued).

	576.9	49.30	1.13	-2.20
	578.8	49.50	1.15	-2.31
	580.8	49.70	1.16	-1.97
	582.7	*49.90*	*1.09*	*-1.91*
	584.6	*50.10*	*1.09*	*-2.20*
	586.5	*50.30*	*0.89*	*-2.38*
	588.5	50.50	0.72	-2.36
	590.4	50.70	1.07	-2.25
	592.2	50.89	0.94	-2.21
	594.2	51.10	0.89	-1.96
	596.2	51.30	0.86	-2.09
	598.1	51.50	0.69	-2.41
	600.0	51.70	0.82	-2.06
	601.7	51.90	1.13	-2.26
	603.4	52.10	0.94	-2.25
	605.1	52.30	0.95	-2.45
	606.8	52.50	1.12	-2.41
	608.5	52.70	1.43	-2.01
	610.2	52.90	1.21	-2.05
	611.9	53.10	1.16	-2.10
	613.6	*53.30*	*1.04*	*-2.25*
	615.3	*53.50*	*1.08*	*-2.32*
	617.0	53.70	0.95	-2.37
	618.8	53.90	0.85	-2.32
	620.7	54.10	0.62	-2.28
	622.5	54.30	0.40	-2.22
	624.3	54.50	0.55	-1.31
	626.2	54.70	0.65	-1.26
	628.0	54.90	0.73	-1.07
	634.3	55.10	0.61	-1.33
	640.6	55.30	0.51	-1.60
	646.9	55.50	0.59	-1.76
	653.2	55.70	0.67	-1.91
	659.5	55.90	0.84	-1.96
	662.7	56.00	0.96	-2.25
	669.0	56.20	1.00	-2.44
	673.1	56.41	0.79	-2.39
	676.8	56.60	0.75	-2.31
	680.7	56.80	0.44	-1.99
	684.5	57.00	0.60	-1.72
	689.0	57.23	0.84	-1.95
	690.8	57.39	0.91	-1.82
	693.3	57.61	0.95	-1.70
	695.5	57.80	1.05	-1.62
	697.7	58.00	1.05	-1.53
	700.0	58.20	1.16	-1.40
	701.4	58.40	0.70	-2.28
	702.8	58.59	0.77	-1.98

Table 1A (continued).

	703.6	58.70	0.94	-1.93
	704.3	58.80	1.10	-1.95
	705.7	59.00	0.84	-1.97
	707.1	59.20	0.74	-1.82
	708.6	59.41	0.73	-1.84
	709.9	59.59	0.93	-1.49
	711.4	59.80	0.70	-1.65
	712.8	60.00	0.90	-1.78
	714.4	60.23	0.78	-1.65
	715.6	60.39	0.97	-1.73
	717.1	60.60	0.89	-1.81
	718.6	60.81	1.14	-1.74
	719.9	61.00	0.90	-2.14
	721.3	61.20	0.91	-1.87
	722.7	61.40	0.94	-1.81
	724.2	*61.60*	*0.96*	*-1.67*
	725.6	61.80	1.01	-1.73
	727.0	62.00	1.19	-2.09
	728.4	62.20	1.29	-2.24
	730.0	*62.42*	*0.86*	*-1.93*
	734.6	*62.60*	*0.86*	*-2.19*
	739.2	62.80	0.83	-2.19
	743.8	63.00	1.01	-1.88
	748.4	63.20	0.46	-1.42
	753.0	63.39	0.64	-1.40
	757.6	63.60	0.46	-1.31
	762.2	63.80	0.54	-1.66
	766.8	64.00	0.79	-1.63
	771.4	64.20	0.98	-1.79
	776.0	64.40	0.96	-1.86

Table 1B.

AGE (ka)	Depth (m)	CaCO3 MAR	% CaCO3	GRAPE	Bulk Sed. MAR
		g/cm2/ka		g/cm3	g/cm2/ka
2.0	0.20	1.39	32.74	1.33	5.41
2.8	0.30	1.69	35.57	1.39	6.06
3.7	0.40	1.57	29.24	1.46	6.82
4.5	0.50	1.34	26.74	1.42	6.39
5.3	0.60	1.77	37.90	1.38	5.95
6.1	0.62	1.80	37.20	1.40	6.17
7.0	0.70	1.88	38.82	1.40	6.17
7.8	0.80	1.49	31.99	1.38	5.95
8.6	0.90	1.96	39.15	1.42	6.39
9.4	1.00	2.14	45.82	1.38	5.95
10.0	1.10	1.67	33.82	1.41	6.28
10.6	1.20	1.91	40.90	1.38	5.95
11.1	1.30	2.48	44.98	1.48	7.04
11.8	1.41	1.68	35.32	1.39	6.06
12.7	1.55	2.36	38.07	1.56	7.90
13.0	1.60	1.92	40.37	1.40	6.17
13.6	1.70	1.54	30.82	1.42	6.39
14.2	1.80	2.07	38.15	1.47	6.93
14.9	1.90	1.85	40.98	1.36	5.74
15.5	2.00	2.00	41.23	1.40	6.17
16.1	2.10	2.08	41.48	1.42	6.39
16.8	2.20	1.95	41.73	1.38	5.95
17.4	2.30	1.79	36.91	1.40	6.17
18.0	2.40	2.35	46.81	1.42	6.39
19.1	2.50	1.84	37.40	1.41	6.28
20.7	2.60	2.09	41.73	1.42	6.39
22.4	2.70	1.88	37.57	1.42	6.39
24.0	2.80	1.70	38.49	1.35	5.63
25.6	2.90	1.81	39.40	1.37	5.85
27.2	3.00	1.88	40.90	1.37	5.85
28.8	3.10	1.78	35.57	1.42	6.39
30.4	3.20	2.11	42.15	1.42	6.39
32.0	3.30	1.96	37.90	1.44	6.60
33.6	3.40	1.97	38.57	1.43	6.50
35.2	3.50	1.82	40.40	1.36	5.74
36.8	3.60	1.88	39.57	1.39	6.06
38.5	3.70	2.23	42.31	1.45	6.71
40.1	3.80	2.12	40.15	1.45	6.71
41.7	3.90	2.00	40.65	1.41	6.28
43.3	4.00	2.00	39.15	1.43	6.50
44.9	4.10	1.54	32.32	1.39	6.06
46.5	4.20	1.48	32.24	1.37	5.85
48.1	4.30	1.74	36.57	1.39	6.06
49.7	4.40	1.73	36.32	1.39	6.06
52.8	4.59	1.63	32.99	1.41	6.28

Table 1B (continued).

56.0	4.79	1.84	32.32	1.50	7.25
59.0	4.99	1.31	28.07	1.38	5.95
62.0	5.19	1.71	33.57	1.43	6.50
65.0	5.39	1.51	27.32	1.48	7.04
68.0	5.59	1.53	26.49	1.51	7.36
71.2	5.80	1.42	27.00	1.45	6.71
74.5	6.02	1.34	28.74	1.38	5.95
77.0	6.19	1.55	29.99	1.44	6.60
80.0	6.39	1.85	38.24	1.40	6.17
84.0	6.59	2.03	42.57	1.39	6.06
88.0	6.79	1.88	35.76	1.45	6.71
92.0	6.99	1.59	29.24	1.47	6.93
96.0	7.19	2.17	39.82	1.47	6.93
100.0	7.39	1.87	33.90	1.48	7.04
103.5	7.60	2.22	38.40	1.51	7.36
106.8	7.80	2.15	39.00	1.48	7.04
110.1	8.00	2.11	40.00	1.45	6.71
113.7	8.22	2.11	41.48	1.43	6.50
116.7	8.40	2.29	45.00	1.43	6.50
120.0	8.60	2.58	49.73	1.44	6.60
122.4	8.80	2.40	40.90	1.52	7.47
124.8	9.00	2.76	51.48	1.46	6.82
126.0	9.10	2.47	46.10	1.46	6.82
127.2	9.20	1.91	38.15	1.42	6.39
129.6	9.40	1.92	37.65	1.43	6.50
132.0	9.60	2.19	41.65	1.45	6.71
133.7	9.80	2.20	41.82	1.45	6.71
136.3	10.10	2.19	40.32	1.47	6.93
138.0	10.30	1.99	38.32	1.44	6.60
139.8	10.50	1.89	39.65	1.39	6.06
141.5	10.70	1.75	36.82	1.39	6.06
143.2	10.90	1.92	37.65	1.43	6.50
145.0	11.10	2.04	39.32	1.44	6.60
146.7	11.30	1.92	37.73	1.43	6.50
147.5	11.40	1.99	39.00	1.43	6.50
149.3	11.60	2.21	41.90	1.45	6.71
151.0	11.80	2.11	41.48	1.43	6.50
153.5	12.00	1.91	37.49	1.43	6.50
154.8	12.10	1.79	35.80	1.42	6.39
156.1	12.20	1.83	33.15	1.48	7.04
158.6	12.40	2.10	41.23	1.43	6.50
161.1	12.60	2.03	36.15	1.49	7.15
163.7	12.80	1.54	30.24	1.43	6.50
167.5	13.10	1.81	34.90	1.44	6.60
170.0	13.30	2.17	40.57	1.46	6.82
173.5	13.50	2.03	41.90	1.40	6.17
177.0	13.70	2.09	40.40	1.44	6.60
180.5	13.90	2.15	40.82	1.45	6.71

Table 1B (continued).

184.0	14.10	2.03	38.57	1.45	6.71
186.7	14.30	2.02	41.73	1.40	6.17
188.0	14.40	1.78	35.00	1.43	6.50
190.7	14.60	1.38	26.15	1.45	6.71
193.3	14.80	1.73	26.49	1.60	8.34
196.0	15.00	1.95	31.80	1.55	7.79
197.8	15.20	1.21	21.91	1.48	7.04
199.6	15.40	1.96	37.23	1.45	6.71
201.5	15.60	2.42	43.73	1.48	7.04
203.3	15.80	2.45	43.07	1.50	7.25
206.0	16.10	2.16	33.82	1.58	8.12
208.2	16.30	1.41	24.07	1.52	7.47
209.3	16.40	1.24	20.00	1.56	7.90
212.6	16.70	1.23	18.83	1.60	8.34
214.8	16.90	1.64	27.24	1.54	7.69
217.0	17.10	1.95	31.40	1.56	7.90
218.4	17.30	0.95	15.91	1.53	7.58
220.6	17.60	1.84	32.24	1.50	7.25
222.0	17.80	1.21	22.99	1.45	6.71
223.4	18.00	1.82	36.32	1.42	6.39
223.8	18.05	1.88	38.82	1.40	6.17
224.1	18.10	1.76	32.40	1.47	6.93
225.8	18.33	1.80	30.24	1.53	7.58
227.0	18.50	1.22	23.07	1.45	6.71
229.2	18.70	1.25	25.91	1.40	6.17
231.3	18.88	2.26	37.01	1.55	7.79
233.7	19.10	1.29	23.65	1.47	6.93
236.0	19.30	1.80	34.74	1.44	6.60
238.7	19.50	2.24	42.57	1.45	6.71
241.3	19.70	1.83	33.65	1.47	6.93
243.9	19.89	2.09	43.07	1.40	6.17
247.1	20.13	2.03	39.82	1.43	6.50
249.3	20.30	2.41	44.23	1.47	6.93
252.0	20.50	1.80	34.15	1.45	6.71
254.7	20.70	1.83	37.07	1.41	6.28
257.2	20.89	2.08	39.48	1.45	6.71
260.0	21.10	1.26	24.24	1.44	6.60
262.5	21.29	1.54	31.70	1.40	6.17
265.3	21.50	1.87	37.40	1.42	6.39
267.9	21.70	2.05	40.80	1.42	6.39
270.5	21.90	2.09	42.32	1.41	6.28
272.7	22.06	2.00	36.70	1.47	6.93
278.5	22.50	1.74	35.90	1.40	6.17
281.1	22.70	1.63	31.99	1.43	6.50
283.6	22.89	1.58	30.57	1.44	6.60
286.4	23.10	1.69	32.15	1.45	6.71
289.0	23.30	1.65	32.90	1.42	6.39
290.9	23.50	1.68	32.40	1.44	6.60

Table 1B (continued).

292.8	23.70	2.00	34.65	1.51	7.36
294.3	23.86	1.58	28.16	1.49	7.15
296.6	24.10	2.06	39.15	1.45	6.71
298.6	24.31	1.55	31.48	1.41	6.28
300.5	24.50	2.19	40.23	1.47	6.93
302.4	24.70	1.56	31.15	1.42	6.39
304.3	24.90	1.61	30.65	1.45	6.71
306.2	25.10	1.32	25.80	1.43	6.50
308.1	25.30	1.53	29.99	1.43	6.50
310.0	25.50	1.48	28.16	1.45	6.71
312.5	25.70	2.08	36.57	1.50	7.25
314.9	25.89	1.89	35.90	1.45	6.71
317.5	26.10	1.64	32.15	1.43	6.50
320.0	26.30	1.79	34.07	1.45	6.71
322.5	26.50	2.08	42.23	1.41	6.28
325.0	26.70	1.99	41.07	1.40	6.17
327.5	26.90	1.99	41.00	1.40	6.17
330.0	27.10	2.01	41.57	1.40	6.17
332.9	27.30	2.13	43.90	1.40	6.17
335.7	27.50	2.05	42.40	1.40	6.17
337.1	27.60	2.72	53.40	1.43	6.50
339.0	27.73	1.98	39.57	1.42	6.39
337.1	27.60	2.15	42.10	1.43	6.50
340.0	27.80	2.14	42.65	1.42	6.39
341.7	28.00	1.97	38.65	1.43	6.50
343.5	28.20	1.99	40.32	1.41	6.28
345.3	28.40	2.25	46.48	1.40	6.17
347.0	28.60	1.80	36.57	1.41	6.28
348.7	28.80	2.08	42.23	1.41	6.28
350.5	29.00	1.96	40.40	1.40	6.17
352.2	29.20	2.69	50.98	1.45	6.71
354.0	29.40	2.12	41.57	1.43	6.50
355.6	29.58	1.93	41.23	1.38	5.95
357.5	29.80	1.82	37.57	1.40	6.17
359.8	30.06	1.91	39.48	1.40	6.17
361.0	30.20	2.07	37.99	1.47	6.93
362.7	30.39	1.79	34.07	1.45	6.71
364.5	30.60	1.31	24.80	1.45	6.71
366.3	30.80	1.46	31.32	1.38	5.95
368.0	31.00	1.31	27.49	1.39	6.06
369.7	31.20	1.49	31.40	1.39	6.06
371.5	31.40	1.29	25.32	1.43	6.50
373.2	31.60	1.74	35.40	1.41	6.28
375.0	31.80	2.47	47.65	1.44	6.60
377.0	32.00	1.61	33.24	1.40	6.17
379.0	32.20	1.51	34.07	1.35	5.63
381.0	32.40	1.40	27.99	1.42	6.39
382.9	32.59	1.23	25.40	1.40	6.17

Table 1B (continued).

385.0	32.80	1.07	23.74	1.36	5.74
387.0	33.00	1.03	22.40	1.37	5.85
390.8	33.38	1.25	25.32	1.41	6.28
393.0	33.60	2.28	43.90	1.44	6.60
395.0	33.80	1.74	34.65	1.42	6.39
397.0	34.00	1.72	35.49	1.40	6.17
399.0	34.20	2.71	53.20	1.43	6.50
401.0	34.40	1.47	31.49	1.38	5.95
403.0	34.60	1.45	29.90	1.40	6.17
405.0	34.80	1.42	30.49	1.38	5.95
414.7	35.00	1.64	37.90	1.34	5.52
424.3	35.20	2.33	44.90	1.44	6.60
434.0	35.40	2.30	47.56	1.40	6.17
436.9	35.60	2.48	49.40	1.42	6.39
439.8	35.80	2.69	54.65	1.41	6.28
442.7	36.00	2.96	55.31	1.46	6.82
445.6	36.20	2.14	44.15	1.40	6.17
448.5	36.40	2.47	50.15	1.41	6.28
451.4	36.60	2.15	44.32	1.40	6.17
454.3	36.80	2.39	50.23	1.39	6.06
456.9	36.98	2.14	45.73	1.38	5.95
458.6	37.10	2.03	45.07	1.36	5.74
461.5	37.30	2.22	42.15	1.45	6.71
464.4	37.50	2.28	41.90	1.47	6.93
467.3	37.70	1.52	26.66	1.50	7.25
470.2	37.90	1.41	25.16	1.49	7.15
473.1	38.10	0.85	16.16	1.45	6.71
476.0	38.30	1.36	23.49	1.51	7.36
481.7	38.70	1.35	25.16	1.46	6.82
484.6	38.90	0.92	16.41	1.49	7.15
487.5	39.10	0.87	17.66	1.41	6.28
490.4	39.30	0.85	17.33	1.41	6.28
493.3	39.50	1.64	30.57	1.46	6.82
496.2	39.70	0.97	16.83	1.51	7.36
499.0	39.89	0.89	17.16	1.44	6.60
502.0	40.10	0.84	15.74	1.46	6.82
503.0	40.30	1.30	24.24	1.46	6.82
504.1	40.50	1.30	23.82	1.47	6.93
504.1	40.50	1.80	33.07	1.47	6.93
505.1	40.70	1.72	33.23	1.44	6.60
506.2	40.90	1.34	24.66	1.47	6.93
507.2	41.10	0.80	17.16	1.38	5.95
508.3	41.30	1.08	22.40	1.40	6.17
510.4	41.70	0.76	11.83	1.59	8.23
512.5	42.10	0.67	11.00	1.55	7.79
513.5	42.30	1.07	17.66	1.54	7.59
514.5	42.50	1.88	31.57	1.53	7.58
515.6	42.70	1.71	31.48	1.47	6.93

Table 1B (continued).

516.6	42.89	1.07	19.32	1.48	7.04
517.7	43.10	1.56	30.15	1.44	6.60
518.7	43.30	0.81	15.08	1.46	6.82
520.0	43.54	0.91	14.08	1.59	8.23
520.8	43.70	0.73	12.75	1.50	7.25
521.9	43.90	0.75	14.74	1.43	6.50
522.9	44.10	0.67	11.50	1.52	7.47
524.0	44.30	1.15	21.74	1.45	6.71
525.0	44.50	1.36	24.55	1.48	7.04
527.8	44.70	1.40	25.82	1.47	6.93
531.1	44.94	1.39	26.41	1.45	6.71
533.3	45.10	1.38	24.99	1.48	7.04
536.1	45.30	1.34	24.24	1.48	7.04
538.9	45.50	1.62	35.32	1.37	5.85
541.7	45.70	1.30	25.57	1.43	6.50
544.3	45.89	1.56	25.57	1.55	7.79
547.2	46.10	1.65	31.40	1.45	6.71
548.6	46.20	1.57	31.90	1.41	6.28
550.0	46.30	1.51	32.82	1.37	5.85
550.9	46.40	1.42	29.82	1.39	6.06
551.8	46.50	1.44	29.32	1.41	6.28
553.6	46.70	1.42	26.49	1.46	6.82
555.4	46.90	1.84	33.90	1.47	6.93
557.1	47.10	2.02	36.49	1.48	7.04
558.9	47.30	2.01	35.82	1.49	7.15
560.7	47.50	1.69	27.24	1.56	7.90
562.5	47.70	2.04	34.32	1.53	7.58
564.3	47.90	2.21	41.23	1.46	6.82
566.1	48.10	2.20	41.15	1.46	6.82
567.9	48.30	2.51	48.50	1.44	6.60
569.6	48.50	1.54	28.74	1.46	6.82
571.4	48.70	1.34	28.16	1.39	6.06
573.2	48.90	1.28	24.24	1.45	6.71
575.0	49.10	1.30	23.57	1.43	7.04
576.9	49.30	1.64	28.32	1.51	7.36
578.8	49.50	1.26	22.07	1.50	7.25
580.8	49.70	1.35	22.99	1.52	7.47
582.7	49.90	1.11	17.91	1.56	7.90
584.6	50.10	1.36	25.83	1.45	6.71
586.5	50.30	1.10	18.49	1.53	7.58
588.5	50.50	1.57	26.00	1.54	7.69
590.4	50.70	1.84	29.65	1.56	7.90
592.2	50.89	1.87	31.07	1.54	7.69
594.2	51.10	2.24	39.40	1.50	7.25
596.2	51.30	1.72	31.15	1.48	7.04
598.1	51.50	1.95	31.00	1.57	8.01
600.0	51.70	1.91	36.24	1.45	6.71
601.7	51.90	1.47	27.99	1.45	6.71

Table 1B (continued).

603.4	52.10	1.21	23.32	1.44	6.60
605.1	52.30	1.55	29.99	1.44	6.60
606.8	52.50	1.94	36.82	1.45	6.71
608.5	52.70	2.31	37.24	1.56	7.90
610.2	52.90	1.84	32.74	1.49	7.15
611.9	53.10	1.71	30.99	1.48	7.04
613.6	53.30	1.50	27.07	1.48	7.04
615.3	53.50	1.09	21.07	1.44	6.60
616.1	53.60	1.36	25.00	1.47	6.93
617.9	53.80	1.61	30.00	1.46	6.82
620.7	54.10	1.77	34.15	1.44	6.60
622.5	54.30	1.79	32.99	1.47	6.93
624.3	54.50	1.90	37.24	1.43	6.50
626.2	54.70	2.17	39.23	1.48	7.04
628.0	54.90	1.93	40.48	1.39	6.06
634.3	55.10	1.89	39.65	1.39	6.06
640.6	55.30	1.85	36.32	1.43	6.50
646.9	55.50	1.92	37.57	1.43	6.50
651.7	55.65	1.90	37.90	1.42	6.39
658.0	55.85	1.99	40.48	1.41	6.28
661.1	55.95	1.86	38.49	1.40	6.17
662.7	56.00	1.74	35.99	1.40	6.17
669.0	56.20	1.64	31.65	1.44	6.60
673.1	56.41	1.43	27.99	1.43	6.50
676.8	56.60	1.49	31.82	1.38	5.95
680.7	56.80	2.16	43.15	1.42	6.39
684.5	57.00	2.11	41.40	1.43	6.50
689.0	57.23	1.89	38.98	1.40	6.17
690.8	57.39	2.44	44.15	1.48	7.04
693.3	57.61	2.52	49.40	1.43	6.50
695.5	57.80	2.03	38.49	1.45	6.71
697.7	58.00	1.54	31.23	1.41	6.28
700.0	58.20	1.95	38.98	1.42	6.39
701.4	58.40	1.79	31.49	1.50	7.25
702.8	58.59	1.83	37.74	1.40	6.17
704.3	58.80	2.05	40.98	1.42	6.39
705.7	59.00	2.34	45.82	1.43	6.50
707.1	59.20	2.12	42.31	1.42	6.39
708.6	59.41	2.56	49.31	1.44	6.60
709.9	59.59	2.47	49.31	1.42	6.39
711.4	59.80	2.28	47.98	1.39	6.06
712.8	60.00	2.17	43.98	1.41	6.28
714.4	60.23	1.89	35.82	1.45	6.71
715.6	60.39	2.16	43.15	1.42	6.39
717.1	60.60	1.70	32.82	1.44	6.60
718.6	60.81	1.31	23.74	1.48	7.04
719.9	61.00	1.47	27.49	1.46	6.82
721.3	61.20	1.10	22.32	1.41	6.28

Table 1B (continued).

722.7	61.40	1.61	30.99	1.44	6.60
724.2	61.60	1.29	23.07	1.49	7.15
725.6	61.80	1.78	35.57	1.42	6.39
727.0	62.00	1.10	22.66	1.40	6.17
728.4	62.20	1.26	23.49	1.46	6.82
729.9	62.40	1.28	23.57	1.47	6.93
734.6	62.60	1.06	19.24	1.48	7.04
739.2	62.80	1.57	30.82	1.43	6.50
743.9	63.00	2.12	40.90	1.44	6.60
748.6	63.20	1.75	38.07	1.37	5.85
753.2	63.39	2.65	46.56	1.50	7.25
757.9	63.60	2.28	39.40	1.51	7.36
762.6	63.80	1.48	29.49	1.42	6.39
767.2	64.00	1.04	18.24	1.50	7.25
771.9	64.20	1.94	38.65	1.42	6.39
776.6	64.40	1.90	36.15	1.45	6.71

Table 2. Sediment geochemical data from Hole 769A.

Sample		Depth (mbsf)	C-org (%)	CaCO3 (%)	Fe2O3 (%)	MnO (%)
-1H-1,	16--18	0.16	0.41	31.13		
-1H-1,	36--38	0.36	0.17	13.78	5.08	1.4
-1H-1,	57--59	0.57		37.41	3.8	0.13
-1H-1,	81--83	0.81		32.98	4.8	0.25
-1H-1,	97--99	0.97	0.25	40.17	4.04	0.23
-1H-1,	136--138	1.36	0.37	39.73		
-1H-2,	12--14	1.62	0.35	47.21		
-1H-2,	31--33	1.81		28.02	4.33	0.16
-1H-2,	56--58	2.06	0.36	40.99		
-1H-2,	92--94	2.42	0.34	40.75		
-1H-2,	112--114	2.62	0.3	36.55		
-1H-3,	2--4	3.02		41.72	4.13	0.19
-1H-3,	23--25	3.23	0.32	35.84		
-1H-3,	51--53	3.51		37.4	3.65	0.17
-1H-3,	87--89	3.87		40.35	4	0.17
-1H-3,	117--119	4.17	0.2	34.68	4.53	0.27
-1H-4,	27--29	4.77		32.31	4.67	0.22
-1H-4,	107--109	5.57	0.17	33.72		
-1H-5,	57--59	6.57		22.91	4.86	0.19
-1H-5,	137--139	7.37	0.18	32.67		
-2H-1,	38--40	8.78		48.6	2.72	0.19
-2H-1,	118--120	9.58	0.19	39.86	3.72	0.25
-2H-2,	58--60	10.48		40.77	3.82	0.19
-2H-3,	118-120	12.58	0.22	36.62		
-2H-4,	78--80	13.68		36.17	3.93	0.22
-2H-5,	37--39	14.77	0.13	24.93	4.89	0.24
-2H-5,	137--139	15.77		41.52	3.79	0.16
-2H-6,	97--99	16.87	0.06	10.22	3.41	0.09
-3H-1	77-79	18.67	0.16	26.03	4.47	0.15
-3H-2,	27--29	19.67	0.2	38.66	3.68	0.2
-3H-3,	77--79	21.67		35.2	3.44	0.2
-3H-4,	46--48	22.86	0.14	30.82	4.56	0.2
-3H-5,	97-99	24.87	0.12	31.85		
-3H-6,	46--48	25.86		27.17	5.14	0.19
-3H-6,	143--145	26.83	0.12	30.6		
-4H-1,	5--7	27.45		43.17	3.4	0.23
-4H-1,	101--103	28.41	0.15	40.28	3.3	0.2
-4H-2,	146--148	30.36	0.19	35.2	4.4	0.27
-4H-3,	97--99	31.2	0.16	21.02		
-4H-4,	137--139	33.27	0.02	6.14		
-4H-5,	96--98	34.36	0.17	26.82	4.11	0.2
-4H-6,	47--49	35.37	0.17	40.13	3.35	0.17
-4H-6,	145--147	36.35		46.38	3.37	0.3
-5H-1,	38--40	37.28	0.18	43.53	3.68	0.2
-5H-1,	138-140	38.28		26.45	4.32	0.22

Table 2 (continued).

-5H-2,	108--110	39.48	0.13	28.09	5.01	0.21
-5H-3,	58--60	40.48		18.38	5.02	0.21
-5H-4,	8--10	41.48	0.15	20.87	5.36	0.26
-5H-4,	107--109	42.47		14.78	4.53	0.17
-5H-5,	66--68	43.56	0.1	9.84	6.26	0.16
-5H-6,	7--9	44.47		23.22	5.11	0.3
-5H-6,	107--109	45.47	0.15	32.68	4.66	0.21
-5H-7,	57--59	46.47		30.48	4.77	0.22
-6H-1,	67--69	47.07	0.16	37.76		
-6H-2,	17--19	48.07		33.79	4.62	0.2
-6H-2,	117--119	49.07	0.12	32.75	4.19	0.28
-6H-3,	68--70	50.08	0.11	22.26	5.29	0.24
-6H-4,	37--39	51.27		31.09	4.41	0.21
-6H-4,	117--119	52.07	0.19	24.13	4.53	0.16
-6H-5,	68--70	53.08		26.93	4.09	0.23
-6H-6,	58--60	54.48	0.18	37.12	3.74	0.19
-6H-7,	8--10	55.48		35.92	3.66	0.2
-7H-1,	32--34	56.22	0.22	33.24	4.12	0.15
-7H-2,	82--84	58.22	0.24	34.85	4	0.23
-7H-2,	146-148	58.86		40.5	3.71	0.2
-7H-3,	53--55	59.43	0.2	46.43		
-7H-3,	146--148	60.36		40.91	3.54	0.23
-7H-5,	145--147	63.35	0.14	45.57	3.44	0.25
-7H-6,	98-100	64.38		33.16	3.59	0.32
-7H-7,	47--49	65.37	0.19	26.85	4.49	0.17

Table 2 (continued).

Depth (mbsf)	TiO2 (%)	SiO2 (%)	Al2O3 (%)	Sr (ppm)	Cu (ppm)
0.16					
0.36	0.45	46.05	13.34	538	194
0.57	0.3	29.95	9.48	639	178
0.81	0.38	32.17	11.31	608	192
0.97	0.32	26.62	9.39	6.09	188
1.36					
1.62					
1.81	0.37	35.77	11.15	655	192
2.06					
2.42					
2.62					
3.02	0.31	27.52	8.88	709	204
3.23					
3.51	0.33	26.25	8.57	628	178
3.87	0.32	27.59	8.91	718	211
4.17	0.37	31.27	10.26	576	193
4.77	0.38	31.94	10.4	571	167
5.57					
6.57	0.34	40.02	11.59	530	192
7.37					
8.78	0.21	22.72	7.4	639	166
9.58	0.34	27.36	8.78	614	149
10.48	0.34	29.14	9.3	721	200
12.58					
13.68	0.32	28.1	9.15	651	163
14.77	0.41	35.64	11.52	475	185
15.77	0.3	29.73	9.21	732	179
16.87	0.33	55.34	13.37	445	138
18.67	0.4	35.97	11.55	511	224
19.67	0.32	27.35	8.98	652	155
21.67	0.32	33.12	9.6	660	192
22.86	0.4	34.22	11.08	539	207
24.87					
25.86	0.43	34.94	11.22	676	211
26.83					
27.45	0.27	28.88	8.18	647	180
28.41	0.3	25.48	8.01	645	169
30.36	0.36	31.69	10.08	586	282
31.2				434	158
33.27					
34.36	0.34	30.88	9.92	623	234
35.37	0.29	26.53	8.29	584	218
36.35	0.27	26.86	8.24	716	191
37.28	0.31	28.99	9.08	732	220
38.28	0.4	38.37	11.55	579	200

Table 2 (continued).

39.48	0.42	35.92	11.64	548	180
40.48	0.44	36.34	11.95	504	171
41.48	0.48	37.77	12.24	464	188
42.47	0.42	47.42	13.34	564	193
43.56	0.56	44.99	15.14	522	258
44.47	0.43	35.5	11.87	570	209
45.47	0.39	33.9	10.76	463	239
46.47	0.4	34.45	11.39	595	227
47.07					
48.07	0.37	33.56	10.75	650	235
49.07	0.36	35.37	10.82	579	188
50.08	0.44	38.56	11.98		
51.27	0.36	36.41	11.01	605	165
52.07	0.42	36.34	11.61	497	193
53.08	0.37	31.73	10.4	505	175
54.48	0.31	28.79	8.96	597	178
55.48	0.32	29.18	9.07	565	163
56.22	0.33	33.61	10.18	614	220
58.22	0.32	32.71	9.97	611	213
58.86	0.28	28.78	8.78	721	232
59.43					
60.36	0.27	29.03	8.43	662	267
63.35	0.26	27.79	8.26	759	184
64.38	0.27	32.44	9.32	539	145
65.37	0.37	37.93	11	553	212

Table 2 (continued).

Depth (mbsf)	Cr (ppm)	Ba (ppm)	Mo (ppm)
0.16			
0.36	56	236	5
0.57	43	142	2
0.81	48	123	2
0.97	37	95	4
1.36			
1.62			
1.81	41	154	2
2.06			
2.42			
2.62			
3.02	47	117	2
3.23			
3.51	27	89	2
3.87	44	109	1
4.17	50	134	2
4.77	54	133	2
5.57			
6.57	36	267	2
7.37			
8.78	13	67	2
9.58	22	73	1
10.48	40	106	2
12.58			
13.68	27	66	3
14.77	31	108	2
15.77	37	122	3
16.87	33	286	2
18.67	48	167	2
19.67	33	80	2
21.67	35	142	3
22.86	50	137	2
24.87			
25.86	42	168	3
26.83			
27.45	14	73	3
28.41	26	84	3
30.36	51	150	3
31.2	25	81	3
33.27			
34.36	42	146	2
35.37	25	90	2
36.35	40	140	4
37.28	42	159	3
38.28	41	169	2

Table 2 (continued).

39.48	48	157	2
40.48	46	105	2
41.48	51	141	2
42.47	44	136	3
43.56	34	167	2
44.47	39	141	2
45.47	41	273	2
46.47	41	144	4
47.07			
48.07	53	160	3
49.07	43	180	2
50.08			
51.27	33	150	3
52.07	36	134	3
53.08	13	74	2
54.48	32	86	1
55.48	16	81	1
56.22	47	161	3
58.22	47	151	3
58.86	43	168	3
59.43			
60.36	34	123	2
63.35	37	143	2
64.38	19	88	3
65.37	50	195	3