

# I. X-RAY MINERALOGY DATA, CAMPBELL PLATEAU AND SOUTH TASMAN SEA: LEG 29, DSDP<sup>1</sup>

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## INTRODUCTION AND METHODS

Semiquantitative determinations of the mineral composition of bulk samples, 2-20  $\mu$ , and <2  $\mu$  fractions were performed according to the methods described in the Appendix of Initial Report Volume 18. The mineral analyses of the 2-20  $\mu$  and <2  $\mu$  fractions were performed on CaCO<sub>3</sub>-free residues.

The stratigraphic position of samples submitted for X-ray diffraction analysis from Leg 29 are listed in Table 1. The X-ray mineralogy data are presented in Tables 2 through 14. The sample depth (in meters) below the sea floor in Table 1 identifies the samples as they are reported in Tables 2 through 14. No X-ray samples were submitted from Site 276.

Several unidentified minerals were detected in Leg 29 samples. Their abundances were determined on a semi-quantitative basis using a hypothetical mineral intensity factor of 3.0. Unidentified minerals are reported on a ranked, semiquantitative scale outlined as follows: Trace, <5%; present, 5 to 25%; abundant 25 to 65%; major, >65%. Although a certain quantity of the unidentified minerals is implied, their concentration is not included in the concentrations of the identified minerals, which are summed to 100%.

Beginning with Leg 28 data, the amorphous scattering percentage which is indicative of the amorphous content in samples has been calculated according to the modified version of the method described in Appendix III, Volume 4 (see Appendix, Volume 28). Briefly, the modified version assumes that the difference between the sum of the total diffuse scattering of the sample is proportional to the amount of amorphous material in the sample. Ideally the function varies between zero and 100%. However, negative values of amorphous scattering result when the calibration standards have a higher diffuse scattering value than the minerals in the sample.

This is the case, for example, in several carbonate oozes from Site 281. In cases where the decalcification procedure yielded a small quantity of residue and the diffraction pattern of the sample backing material was evident in the sample diffraction, the diffuse scattering and amorphous scattering values were not reported.

Drilling mud, containing montmorillonite and barite, was used at only one site on Leg 29. Mud was used at Site 281 between Cores 17 and 18. No X-ray mineralogy samples were submitted from these cores.

Summary tables describing the age, lithology, and a listing of the dominant minerals, which normally are included in the X-ray mineralogy chapter, are recorded in expanded summary tables accompanying each Site Report (this volume).

## MINERAL NOTES

Halite, reported in several <2 $\mu$  samples, has been traced to an impurity introduced during sample preparation. The presence of halite does not interfere with the identification or quantification of any sedimentary minerals, and the relative percentages of the reported minerals are correct.

Examination of the barite-containing samples from Unit 1, Site 281 showed that the high barite concentrations exist because only the detected minerals (summed to 100%) are reported. A microscopic examination of the acid-insoluble residues revealed that they consist largely of radiolarian fragments. The crystalline phases constitute less than 5% of the sample. Barite crystals could not be seen in the residues. We tentatively conclude that barite is occurring as sub-microscopic grains (less than approximately 2 $\mu$ ) sequestered in the radiolarian skeletal fragments.

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TABLE 1  
Stratigraphic Position of X-Ray Mineralogy  
Samples, Leg 29

Site	Core	Section	Interval (cm)	Depth (m)
275	1	1	122.0	1.2
275	2	5	122.0	12.2
275	2	6	103.0	13.5
275	2	3	142.0	9.4
275	4	2	68.0	35.7
277	1	4	137.0	5.9
277	2	1	117.0	8.2
277	2	6	33.0	14.8
277	3	4	94.0	21.9
277	4	2	84.0	28.3
277	5	6	76.0	43.8
277	7	2	23.0	56.2
277	7	5	26.0	60.8
277	9	2	80.0	75.8
277	10	5	98.0	90.0
277	16	1	56.0	140.6
277	19	2	95.0	170.9
277	22	3	71.0	200.7
277	28	2	20.0	255.7
277	34	1	83.0	330.8
277	43	1	66.0	435.2
277	44	3	56.0	447.6
277	45	4	112.0	459.1
277	46	2	85.0	465.4
278	1	1	140.0	1.4
278	1	2	89.0	2.4
278	1	4	130.0	5.8
278	2	4	58.0	106.1
278	3	5	120.0	117.7
278	6	3	105.0	143.1
278	8	2	37.0	159.9
278	12	1	75.0	196.8
278	13	4	44.0	210.4
278	16	6	36.0	241.9
278	18	6	70.0	261.2
278	21	6	54.0	289.5
278	24	5	54.0	316.5
278	28	2	42.0	349.9
278	31	3	55.0	399.0
278	34	3	13.0	427.1
279A	1	1	80.0	13.8
279A	3	6	107.00	117.1
279A	4	2	87.0	120.4
279A	6	5	146.0	144.5
279A	7	5	65.0	153.1
279A	8	5	84.0	162.8
279A	9	5	130.0	172.8
279A	10	5	90.0	181.9
279A	11	6	50.0	192.5
280	1	2	36.0	1.9
280	1	4	120.0	5.7
280A	1	2	5.0	39.5
280A	1	2	122.0	40.7
280A	2	2	22.0	55.2
280A	3	2	70.0	74.7
280A	5	2	92.0	93.9
280A	7	2	109.0	122.6
280A	8	2	100.0	141.5
280A	10	6	60.0	204.1
280A	14	1	80.0	291.8
280A	17	1	82.0	377.3

TABLE 1 - Continued

Site	Core	Section	Interval (cm)	Depth (m)
280A	18	1	107.0	406.1
280A	19	3	79.0	446.8
280A	21	2	114.0	512.1
281	3	6	73.0	25.2
281	6	5	83.0	52.3
281	9	1	114.0	75.1
281	10	5	104.0	90.5
281	11	5	84.0	99.8
281	12	5	105.0	109.6
281	13	5	135.0	119.3
281	14	1	64.0	122.1
281	15	2	125.0	133.8
281	16	3	123.0	144.7
281A	3	2	120.0	38.7
282	1	3	66.0	3.7
282	4	2	74.0	30.2
282	5	2	70.0	55.7
282	5	CC	-	56.0
282	5	CC	-	56.5
282	7	2	42.0	67.9
282	8	2	63.0	77.6
282	9	2	67.0	87.2
282	11	4	54.0	109.0
282	11	CC	-	113.5
282	12	3	80.0	117.3
282	13	3	108.0	136.6
282	14	3	80.0	164.8
282	15	2	25.0	191.3
282	16	1	61.0	218.6
282	17	3	78.0	259.8
282	18	1	108.0	295.1
283	2	2	25.0	11.8
283	5	2	98.0	88.5
283	6	2	74.0	126.2
283	7	6	91.0	160.9
283	8	2	59.0	192.6
283	9	2	71.0	221.2
283	11	2	81.0	278.3
283	12	2	80.0	325.8
283	13	2	78.0	373.3
283	14	3	57.0	431.6
283	15	2	80.0	487.3
283	16	2	103.0	544.5
283	17	4	91.0	575.9
283A	2	3	63.0	14.6
284	1	2	119.0	2.7
284	3	2	76.0	20.3
284	5	3	95.0	41.0
284	6	2	63.0	48.6
284	7	2	61.0	58.1
284	9	2	70.0	77.2
284	10	2	62.0	86.6
284	11	2	67.0	96.2
284	12	3	67.0	107.2
284	13	3	57.0	116.6
284	14	2	65.0	124.7
284	16	2	72.0	143.7
284	17	2	72.0	153.2
284	19	2	42.0	171.9
284	21	2	61.0	191.1
284	22	6	62.0	206.6
284A	2	2	67.0	29.7

TABLE 2  
Leg 29, Hole 275

No.	Core Depth	Sample Depth Below Sea Floor	Diff.	Amor.	Quar.	Cris.	K-Fe	Plag.	Kaol	Mica	Chlo.	Mont.	Trid.	Clin.	Pyri.	Gyps.	Amph.
<b>Bulk</b>																	
1	0.0-5.0	1.20	79.0	56.1	43.0	—	14.3	8.8		20.3	0.9	9.8	—	—	—	2.1	
2	5.0-14.5	9.40	92.7	85.6	42.2	—	25.2	20.6		10.6	1.4	—	—	—	—	—	
		12.20	73.5	46.0	48.2	—	12.9	13.8		24.1	0.9	—	—	—	—	—	
		13.50	68.1	32.9	45.3	1.2	13.8	8.6		22.0	1.0	2.4	1.4	3.3	0.9	—	
4	33.5-43.0	35.70	68.1	18.0	21.9	16.8	14.4	8.6		31.0	1.9	2.9	1.2	—	1.2	—	
<b>2-20<math>\mu</math> Fraction</b>																	
1	0.0-5.0	1.20	NR <sup>a</sup>	NR	44.0	—	9.4	7.3		37.5	1.8	—	—	—	—	—	—
2	5.0-14.5	9.40	NR	NR	33.9	—	17.7	29.9		9.4	1.2	—	—	3.8	—	—	4.1
		12.20	81.6	61.2	45.5	—	8.1	7.7		31.1	1.4	4.4	—	1.9	—	—	
		13.50	63.2	19.2	31.2	3.0	5.6	5.6		34.6	2.3	—	0.7	13.1	3.9	—	
4	33.5-43.0	35.70	62.7	14.4	32.3	7.3	7.3	7.3		36.9	2.5	—	0.6	—	5.8	—	
<b>&lt;2<math>\mu</math> Fraction</b>																	
1	0.0-5.0	1.20	92.4	81.2	14.0	—	5.1	4.6	3.0	30.6	1.5	40.3	—	—	—	1.0	
2	5.0-14.5	9.40	97.6	94.7	26.2	—	10.1	15.4	—	44.0	—	—	—	—	—	4.2	
		12.20	83.7	58.9	17.8	—	2.0	1.4	1.2	15.9	0.5	59.5	—	1.7	—	—	
		13.50	87.3	65.4	9.8	11.7	2.6	2.3	—	30.1	2.0	27.7	2.2	6.9	4.7	—	
4	33.5-43.0	35.70	87.0	34.3	4.2	60.7	1.5	1.5	—	10.0	0.6	12.9	5.5	—	3.0	—	

<sup>a</sup>NR = not reported.

TABLE 3  
Leg 29, Hole 277

No.	Core Depth	Sample Depth Below Sea Floor	Diff.	Amor.	Calc.	Quar.	Cris.	K-Fc.	Plag.	Kaol.	Mica	Chlo.	Mont.	Trid.	Clin.	Phil.	Anat.	Pyri.	Gyps.	Apat.	Bari.	Hall.
1	0.0-7.0	5.90	53.5	8.4	98.9	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	7.0-16.5	8.20	48.5	1.5	99.0	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		14.80	51.8	5.1	95.8	2.4	-	-	-	-	-	-	-	-	1.8	-	-	-	-	-	-	-
3	16.5-26.0	21.90	46.1	6.3	99.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	26.0-35.5	28.30	45.2	8.1	99.6	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	35.5-45.0	43.80	48.6	1.4	99.7	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	54.5-64.0	56.20	43.2	12.0	99.3	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		60.80	44.1	10.3	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	73.5-83.0	75.80	44.9	8.7	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	83.0-92.5	90.00	44.1	10.3	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	140.0-149.5	140.60	49.9	0.2	94.8	0.6	-	-	-	-	1.1	-	3.5	-	-	-	-	-	-	-	-	-
19	168.5-178.0	170.90	47.4	3.7	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	197.0-206.5	200.70	46.4	5.7	99.4	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	254.0-263.5	255.70	48.5	5.9	91.6	1.4	4.6	-	-	-	1.4	-	-	-	-	-	-	-	-	-	-	-
34	330.0-339.5	330.80	39.9	18.5	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	434.5-444.0	435.20	52.5	6.4	85.5	-	11.0	-	-	-	-	-	-	3.4	-	-	-	-	-	-	-	-
44	444.0-453.5	447.60	59.2	14.2	80.9	2.2	4.3	-	-	-	2.7	-	3.4	1.2	4.7	-	-	-	-	-	0.6	-
45	453.5-463.0	459.10	54.5	4.5	86.6	1.0	5.4	-	-	-	-	-	-	1.9	5.1	-	-	-	-	-	-	-
46	463.0-472.5	465.40	48.5	10.0	89.5	0.4	7.3	-	-	-	-	-	1.1	1.6	-	-	-	-	-	-	-	-
2-20μ Fraction																						
2	7.0-16.5	8.20	NR	NR	27.2	-	-	24.9	-	11.2	3.1	-	-	-	11.8	21.8	-	-	-	-	-	-
		14.80	58.8	17.1	8.4	-	-	5.4	-	4.6	-	-	-	-	73.7	-	1.3	-	-	6.5	-	-
3	16.5-26.0	21.90	NR	NR	24.1	-	-	8.6	-	12.9	-	7.0	-	-	23.9	8.3	-	-	-	12.0	3.2	-
4	26.0-35.5	28.30	NR	NR	35.4	-	-	10.8	-	23.0	2.8	-	-	-	1.3	8.3	-	-	-	11.2	6.1	1.1
5	35.5-45.0	43.80	NR	NR	23.9	-	-	38.7	2.7	15.3	-	10.1	-	-	1.1	5.1	-	1.2	-	-	1.9	-
7	54.5-64.0	56.20	NR	NR	42.8	-	-	10.1	-	22.3	-	-	-	-	2.1	19.1	-	3.6	-	-	-	-
		60.80	NR	NR	41.8	-	-	8.1	-	28.0	3.4	-	-	-	-	18.8	-	-	-	-	-	-
9	73.5-83.0	75.80	NR	NR	43.4	-	-	6.6	-	31.9	4.8	-	-	-	-	13.4	-	-	-	-	-	-
10	83.0-92.5	90.00	NR	NR	46.5	-	-	1.3	-	27.6	5.4	-	-	-	1.5	15.8	-	1.9	-	-	-	-
16	140.0-149.5	140.60	83.7	61.3	24.2	-	-	5.7	-	33.9	3.3	25.8	-	-	5.6	-	1.4	-	-	-	-	-
19	168.5-178.0	170.90	88.9	76.4	40.8	-	-	6.7	-	25.0	1.5	-	-	-	3.8	9.4	-	3.6	-	-	9.2	-
22	197.0-206.5	200.70	NR	NR	35.1	-	-	9.9	-	45.0	6.1	-	-	-	-	-	-	1.5	-	-	2.5	-
28	254.0-263.5	255.70	72.3	35.2	24.4	9.2	9.4	7.3	-	26.4	2.0	5.6	1.0	14.7	-	-	-	-	-	-	-	-
34	330.0-339.5	330.80	NR	NR	5.2	11.4	-	2.7	-	4.9	6.9	-	-	-	40.5	-	-	5.6	-	-	22.7	-
43	434.5-444.0	435.20	88.1	10.3	0.9	76.3	-	-	-	-	-	-	-	19.6	2.1	-	-	-	-	-	1.2	-
44	444.0-453.5	447.60	72.3	29.4	22.7	21.7	3.5	6.7	-	19.9	2.0	-	-	2.3	18.2	-	-	-	-	-	3.1	-
45	453.5-463.0	459.10	79.7	1.1	11.3	60.2	-	-	-	3.0	-	-	-	12.0	13.5	-	-	-	-	-	-	-
46	463.0-472.5	465.40	83.3	10.7	8.4	63.9	2.6	2.3	-	7.2	0.9	-	-	11.6	1.5	-	-	-	-	-	1.7	-
< 2μ Fraction																						
1	0.0-7.0	5.90	86.1	63.4	7.9	-	-	7.2	5.6	6.2	-	61.8	-	2.6	8.8	-	-	-	-	-	-	-
2	7.0-16.5	8.20	90.7	77.4	14.6	-	-	9.6	6.8	11.3	1.6	44.5	-	4.6	6.9	-	-	-	-	-	-	-
		14.80	88.7	72.6	5.7	-	-	4.7	1.4	12.6	-	41.9	-	12.5	-	-	-	-	-	-	-	-
3	16.5-26.0	21.90	86.3	68.3	11.5	-	-	4.4	5.0	10.0	-	33.6	-	8.7	-	-	-	-	-	21.3	-	-
4	26.0-35.5	28.30	89.2	74.6	15.8	-	-	3.4	13.5	10.8	-	41.5	-	-	-	-	-	-	-	8.8	4.6	1.6
5	35.5-45.0	43.80	90.0	75.9	8.4	-	-	8.0	5.4	7.7	-	57.0	-	-	-	-	-	1.5	1.2	4.2	2.4	4.0
7	54.5-64.0	56.20	93.0	84.0	18.2	-	-	6.8	18.9	16.6	-	33.8	-	-	-	-	-	-	-	-	-	5.8
		60.80	85.8	65.6	13.1	-	-	1.3	11.6	17.9	-	49.5	-	-	-	-	-	-	-	-	-	6.7
9	73.5-83.0	75.80	88.2	70.2	12.1	-	-	1.8	9.9	12.4	-	61.2	-	-	-	-	-	-	-	-	-	2.6
10	83.0-92.5	90.00	86.8	68.1	13.6	-	-	2.0	6.7	14.7	2.7	51.6	-	-	3.3	-	-	-	-	-	-	4.4
16	140.0-149.5	140.60	84.8	63.8	9.6	-	-	2.9	-	7.4	2.0	66.1	-	-	-	-	-	1.9	-	-	2.8	7.4
19	168.5-178.0	170.90	93.4	85.6	20.5	-	-	5.3	-	16.2	6.2	39.0	-	-	-	-	-	-	-	-	11.2	1.6
22	197.0-206.5	200.70	87.8	70.9	13.4	-	-	4.0	-	36.7	4.6	35.8	-	-	-	-	-	-	-	-	3.8	1.7
28	254.0-263.5	255.70	87.2	34.0	8.5	62.7	-	1.4	-	3.3	-	17.2	5.6	1.2	-	-	-	-	-	-	-	-
34	330.0-339.5	330.80	86.1	53.3	5.1	30.8	-	-	-	4.1	-	38.1	5.8	6.1	-	-	-	-	-	-	7.2	2.9
43	434.5-444.0	435.20	84.5	-2.7	1.3	66.7	-	-	-	2.2	-	16.7	11.7	1.4	-	-	-	-	-	-	-	-
44	444.0-453.5	447.60	81.0	27.6	5.1	38.9	-	-	-	4.5	1.4	45.4	2.6	0.8	-	-	-	-	-	-	1.3	-
45	453.5-463.0	459.10	84.1	16.9	4.5	58.4	-	-	-	4.0	-	21.2	8.3	3.7	-	-	-	-	-	-	-	-
46	463.0-472.5	465.40	86.9	6.5	2.4	74.5	-	-	-	1.8	-	12.2	8.6	-	-	-	-	-	-	-	0.6	-

NR = Not reported.

TABLE 4  
Leg 29, Hole 278

No.	Core Depth	Sample Depth Below Sea Floor	Diff.	Amor.	Calc.	Dolo.	Quar.	K-Fe.	Plag.	Kaol.	Mica	Chlo.	Mont.	Gyps.	Amph.	U-I
<b>Bulk</b>																
1	0.0-6.0	1.40	78.6	57.9	28.5	—	15.3	5.0	32.3	—	8.6	1.6	3.2	—	5.4	P
		2.40	76.6	53.6	20.6	—	16.2	9.6	32.2	—	11.0	1.8	3.1	1.3	4.3	—
		5.80	85.8	71.5	58.2	—	8.5	—	13.7	—	10.1	1.9	5.2	—	2.5	P
2	101.0-110.5	106.10	88.6	77.4	78.7	—	5.0	—	6.7	—	6.8	0.9	—	—	2.0	P
3	110.5-120.0	117.10	85.7	71.6	92.1	—	2.6	—	1.8	—	3.5	—	—	—	—	P
6	139.0-148.5	143.10	82.7	65.6	61.1	—	8.7	3.4	14.1	—	7.9	1.3	2.0	—	1.5	T
8	158.0-167.5	159.90	83.9	66.7	14.5	—	18.8	4.6	26.9	1.9	18.7	1.5	8.7	—	4.3	—
12	196.0-205.5	196.80	64.6	29.3	85.7	—	3.3	1.3	2.4	—	6.5	0.8	—	—	—	—
13	205.5-215.0	210.40	62.6	25.2	88.2	—	2.7	1.4	2.3	—	4.3	—	1.1	—	—	—
15	224.5-234.0	228.10	84.0	64.5	—	—	19.7	9.6	16.7	3.0	37.4	3.4	10.2	—	—	—
16	234.0-243.5	241.90	88.3	74.2	—	—	21.6	7.6	17.7	1.0	36.9	3.7	11.4	—	—	—
18	253.0-262.5	261.20	75.5	49.7	54.3	—	10.0	5.5	9.8	0.6	14.9	1.4	3.5	—	—	—
21	281.5-291.0	289.50	74.3	47.6	61.9	—	7.7	5.0	7.2	—	14.0	2.0	2.3	—	—	—
24	310.0-319.5	316.50	75.3	50.0	75.0	—	4.6	2.4	4.3	1.6	8.7	0.9	2.5	—	—	—
28	348.0-357.5	349.90	84.9	67.2	—	—	23.4	9.1	17.3	—	32.7	4.5	12.9	—	—	—
31	395.5-405.0	399.00	60.3	20.0	78.6	—	4.3	1.9	3.5	1.1	8.5	0.9	1.1	—	—	—
34	424.0-429.0	427.10	65.8	30.6	74.6	1.1	4.8	1.2	3.0	2.4	6.6	0.7	5.6	—	—	—
<b>2-20<math>\mu</math> Fraction</b>																
1	0.0-6.0	1.40	88.7	78.4	—	—	26.2	7.3	42.4	—	11.0	3.7	—	—	9.4	—
		2.40	80.7	62.6	—	—	24.8	8.4	37.7	—	13.8	3.8	—	—	11.5	—
		5.80	94.9	90.3	—	—	24.2	9.3	38.4	—	11.5	5.5	—	—	11.2	—
2	101.0-110.5	106.10	98.8	97.7	—	—	29.7	14.7	28.2	—	11.4	5.5	—	—	10.5	—
6	139.0-148.5	143.10	94.4	88.9	—	—	27.1	6.8	35.5	3.7	17.0	1.5	—	—	8.4	—
8	158.0-167.5	159.90	85.4	71.2	—	—	28.1	8.5	35.0	—	18.0	2.7	—	—	7.7	—
12	196.0-205.5	196.80	91.2	82.7	—	—	35.4	11.6	28.2	—	19.5	4.1	—	—	1.2	—
13	205.5-215.0	210.40	88.8	77.7	—	—	34.4	12.9	26.8	—	20.7	3.7	—	—	1.5	—
15	224.5-234.0	228.10	76.5	52.6	—	—	33.8	10.4	25.8	—	25.5	3.3	—	—	1.3	—
16	234.0-243.5	241.90	85.9	71.5	—	—	34.2	11.2	25.0	2.2	23.5	2.8	—	—	1.1	—
18	253.0-262.5	261.20	77.3	55.1	—	—	35.4	13.3	27.3	—	18.6	3.5	—	—	1.9	—
21	281.5-291.0	289.50	87.5	75.3	—	—	35.5	13.4	26.8	—	19.2	4.0	—	—	1.0	—
24	310.0-319.5	316.50	93.8	87.9	—	—	34.1	11.5	31.6	1.0	16.1	4.0	—	—	1.7	—
28	348.0-357.5	349.90	82.3	65.0	—	—	34.9	10.1	26.2	—	23.5	5.3	—	—	—	—
31	395.5-405.0	399.00	77.8	55.5	—	—	37.4	10.5	23.2	—	24.9	4.0	—	—	—	—
34	424.0-429.0	427.10	81.3	61.5	—	—	32.0	7.8	16.9	4.8	32.8	5.7	—	—	—	—
<b>&lt;2<math>\mu</math> Fraction</b>																
1	0.0-6.0	1.40	90.9	80.3	—	—	12.8	7.8	17.2	4.9	15.6	7.4	30.3	—	4.1	—
		2.40	86.7	70.6	—	—	11.2	6.1	15.5	5.6	19.6	6.3	31.0	1.8	2.9	—
		5.80	94.5	88.2	—	—	14.4	4.4	18.8	—	16.6	10.5	35.3	—	—	—
2	101.0-110.5	106.10	98.3	96.3	—	—	19.8	6.4	11.0	—	23.5	9.2	30.2	—	—	—
6	129.0-148.5	143.10	95.3	89.7	—	—	13.9	7.7	11.4	8.2	22.9	7.4	25.3	—	3.2	—
8	158.0-167.5	159.90	90.6	77.5	—	—	10.9	4.9	12.1	4.2	16.6	2.2	47.4	—	1.7	—
12	196.0-205.5	196.80	86.6	69.1	—	—	14.6	6.6	14.8	3.9	24.8	3.3	32.2	—	—	—
13	205.5-215.0	210.40	86.6	69.1	—	—	14.7	6.7	12.9	6.3	24.3	3.1	30.4	—	1.7	—
15	224.5-234.0	228.10	86.7	69.6	—	—	15.0	6.7	14.4	6.1	23.7	3.6	30.5	—	—	—
16	234.0-243.5	241.90	86.8	69.2	—	—	14.9	6.0	11.1	5.0	26.1	3.4	33.5	—	—	—
18	253.0-262.5	261.20	86.7	70.1	—	—	16.3	7.3	14.7	4.4	21.2	4.7	31.5	—	—	—
21	281.5-291.0	289.50	86.6	69.5	—	—	17.1	8.0	12.0	5.4	21.3	4.2	32.1	—	—	—
24	310.0-319.5	316.50	87.0	70.5	—	—	16.3	8.7	13.6	6.4	20.6	3.7	30.8	—	—	—
28	348.0-357.5	349.90	86.4	69.9	—	—	18.0	8.8	17.2	—	28.3	5.2	22.5	—	—	—
31	395.5-405.0	399.00	84.2	64.7	—	—	19.0	6.8	15.6	4.7	29.7	3.8	20.5	—	—	—
34	424.0-429.0	427.10	84.1	63.9	—	—	19.8	6.0	11.4	5.4	26.6	2.9	26.2	1.7	—	—

TABLE 5  
Leg 29, Hole 279A

No.	Core Depth	Sample Depth Below Sea Floor	Diff.	Amor.	Calc.	Quar.	K-Fe.	Plag.	Kaol.	Mica.	Chlo.	Mont.	Amph.	Hali.	Augi.	U-1
<b>Bulk</b>																
1	13.0-20.0	13.80	55.2	10.7	86.6	2.0	—	2.6		6.8	1.1	—	0.9		—	T
3	108.5-118.0	117.10	48.6	-1.5	96.7	1.1	—	1.1		1.1	—	—	—		—	—
4	118.0-127.5	120.40	51.2	3.4	95.0	1.1	—	2.0		2.0	—	—	—		—	—
6	137.0-146.5	144.50	51.9	5.0	89.4	1.1	—	5.4		1.9	—	—	—		2.2	—
7	146.5-156.0	153.10	48.9	-0.8	94.3	0.9	1.2	1.5		—	—	—	—		2.2	—
8	156.0-165.5	162.80	51.5	4.1	94.1	0.9	—	1.3		1.1	—	—	—		2.6	T
9	165.5-175.0	172.80	48.7	-1.0	98.1	0.7	—	1.2		—	—	—	—		—	—
10	175.0-184.5	181.90	49.9	1.0	97.1	0.4	—	1.4		—	—	1.1	—		—	—
11	184.5-194.0	192.50	48.6	-1.7	96.8	0.5	—	1.2		—	—	1.5	—		—	—
<b>2-20<math>\mu</math> Fraction</b>																
1	13.0-20.0	13.80	75.4	51.5		22.8	6.0	36.4	—	22.1	5.0	—	7.6		—	—
3	108.5-118.0	117.10	75.3	49.2		23.3	9.4	28.9	1.2	17.1	3.8	13.1	—		3.2	—
4	118.0-127.5	120.40	75.6	50.2		20.7	9.0	30.7	2.4	16.2	3.0	8.7	—		9.3	—
6	137.0-146.5	144.50	74.0	47.2		17.2	9.3	30.8	1.0	14.1	2.7	8.2	—		16.7	—
7	146.5-156.0	153.10	74.0	46.8		16.7	13.1	32.2	—	12.5	2.5	10.6	—		12.5	—
8	156.0-165.5	162.80	75.9	49.9		16.6	8.2	27.6	—	14.7	3.1	15.1	—		14.8	—
9	165.5-175.0	172.80	80.5	59.5		22.0	6.4	28.8	2.0	15.6	3.0	15.8	—		6.4	—
10	175.0-184.5	181.90	76.3	50.1		20.3	5.8	29.7	2.5	16.8	2.8	18.3	—		3.8	—
11	184.5-194.0	192.50	78.9	55.1		16.3	4.2	32.9	2.9	14.1	2.9	25.0	—		1.8	—
<b>&lt; 2<math>\mu</math> Fraction</b>																
1	13.0-20.0	13.80	81.4	60.1		12.1	4.3	20.2	—	31.4	9.1	18.4	4.4		—	—
3	108.5-118.0	117.10	84.0	61.6		12.4	5.1	8.9	8.5	17.4	2.4	45.3	—		—	—
4	118.0-127.5	120.40	89.8	78.2		22.1	8.8	21.7	4.1	11.2	4.3	27.9	—		—	—
6	137.0-146.5	144.50	88.9	74.0		16.0	3.9	12.1	11.2	17.2	—	34.9	—		4.7	—
7	146.5-156.0	153.10	87.8	73.0		16.6	5.5	16.1	5.9	16.0	4.5	31.4	—		4.0	—
8	156.0-165.5	162.80	88.3	73.2		16.8	6.9	15.9	5.8	10.4	1.6	41.1	—		1.4	—
9	165.5-175.0	172.80	90.1	77.4		17.3	5.7	12.5	6.4	14.0	3.0	39.8	—	1.3	—	—
10	175.0-184.5	181.90	89.0	76.8		12.6	4.8	9.2	4.8	8.8	2.1	39.6	—	18.2	—	—
11	184.5-194.0	192.50	89.9	75.8		12.9	—	13.3	5.9	9.5	2.1	56.4	—	—	—	—

U-1 peaks at 5.76 Å, 3.63 Å, and 8.12 Å among others. T = trace.

TABLE 6  
Leg 29, Hole 280

No.	Core Depth	Sample Depth Below Sea Floor	Diff.	Amor.	Calc.	Quar.	K-Fe.	Plag.	Kaol.	Mica.	Mont.	Chlo.	Amph.	Gyps.	Hali.
<b>Bulk</b>															
1	0.0-6.0	1.90	87.8	72.4	—	23.5	11.3	11.6	5.3	24.7	22.5	1.1			
		5.70	42.3	-13.8	100.0	—	—	—	—	—	—	—			
<b>2-20<math>\mu</math> Fraction</b>															
1	0.0-6.0	1.90	83.1	65.9		39.8	11.0	20.7	3.4	21.9		2.2	1.1		
<b>&lt; 2<math>\mu</math> Fraction</b>															
1	0.0-6.0	1.90	90.7	79.6		16.9	9.2	13.7	6.9	8.9	32.5			11.9	—
		5.70	NR	NR		13.4	11.5	9.7	6.6	15.2	40.1			2.8	0.6

NR = not reported

TABLE 7  
Leg 29, Hole 280A

No.	Core Depth	Sample Depth Below Sea Floor	Diff.	Amor.	Quar.	Cris.	K-Fe.	Plag.	Kaol.	Mica.	Chlo.	Mont.	Trid.	Clin.	Pyri.	Gyps.	Hali.
<b>Bulk</b>																	
1	38.0-44.0	39.50	79.1	54.4	27.9	-	6.7	17.7	-	34.1	2.4	11.2	-	-	-	-	-
		40.70	81.3	58.6	27.1	-	5.3	15.0	-	34.3	2.7	15.6	-	-	-	-	-
2	53.5-63.0	55.20	78.0	53.7	24.7	-	4.2	14.4	-	40.6	9.3	6.7	-	-	-	-	-
3	72.5-82.0	74.70	77.9	53.9	29.4	-	5.5	16.5	-	32.1	6.5	8.3	-	-	1.7	-	-
5	91.5-101.0	93.90	77.5	52.4	26.7	-	5.0	13.8	-	38.5	7.9	8.1	-	-	-	-	-
7	120.0-129.5	122.60	82.9	64.1	25.2	-	5.6	15.0	-	37.6	7.9	6.5	-	-	-	1.0	1.1
8	139.0-148.5	141.60	81.3	52.9	28.8	23.2	5.5	13.0	-	15.5	3.1	8.0	-	2.0	0.8	-	-
10	196.0-205.5	204.10	65.9	24.9	25.7	6.0	5.9	14.1	-	37.8	7.4	3.1	-	-	-	-	-
14	291.0-300.5	291.80	75.8	36.4	25.7	22.0	5.5	11.0	-	19.9	1.4	9.3	1.3	3.9	-	-	-
17	376.5-386.0	377.30	65.0	20.6	25.1	-	4.6	3.3	-	32.5	5.7	26.6	-	-	2.2	-	-
18	405.0-414.5	406.10	60.0	12.7	39.8	-	3.4	5.0	-	27.1	2.9	20.6	-	-	1.1	-	-
19	443.0-452.5	446.80	59.5	10.8	39.6	-	3.1	2.6	-	29.8	3.0	20.4	-	-	1.5	-	-
21	509.5-512.5	512.10	58.9	17.3	66.5	-	1.8	1.7	0.5	21.0	1.4	6.1	-	-	1.0	-	-
<b>2-20<math>\mu</math> Fraction</b>																	
1	38.0-44.0	39.50	71.4	43.5	45.2	-	8.2	23.2	-	20.8	2.6	-	-	-	-	-	-
		40.70	81.1	62.9	47.3	-	6.6	21.6	-	21.1	3.4	-	-	-	-	-	-
2	53.5-63.0	55.20	73.0	48.1	43.0	-	6.5	22.2	-	20.1	7.2	-	-	-	1.0	-	-
3	72.5-82.0	74.70	72.0	46.4	46.0	-	7.9	25.4	-	14.4	4.6	-	-	-	1.8	-	-
5	91.5-101.0	93.90	69.5	40.1	39.6	-	5.4	19.3	-	26.1	7.9	1.1	-	-	0.6	-	-
7	120.0-129.5	122.60	76.7	55.3	40.3	-	6.6	20.1	-	22.0	9.2	-	-	-	1.8	-	-
8	139.0-148.5	141.60	67.5	29.6	42.8	12.1	6.2	16.6	-	13.9	3.3	2.5	-	2.6	-	-	-
10	196.0-205.5	204.10	55.1	8.0	38.2	4.3	3.4	17.4	-	29.0	7.7	-	-	-	-	-	-
14	291.0-300.5	291.80	72.6	27.8	16.7	22.2	4.6	8.9	-	23.3	2.9	4.9	1.6	14.1	0.8	-	-
17	376.5-386.0	377.30	59.7	10.6	29.1	-	5.3	4.0	-	40.3	4.7	11.5	-	-	5.1	-	-
18	405.0-414.5	406.10	56.2	8.2	43.4	-	5.6	4.6	-	32.7	4.5	5.8	-	-	3.3	-	-
19	443.0-452.5	446.80	56.9	7.9	37.3	-	5.3	5.6	-	36.8	4.6	6.6	-	-	3.8	-	-
21	509.5-512.5	512.10	54.8	8.5	59.1	-	3.7	3.0	1.5	27.4	2.2	-	-	-	3.0	-	-
<b>&lt;2<math>\mu</math> Fraction</b>																	
1	38.0-44.0	39.50	82.9	60.0	17.5	-	6.7	13.4	2.6	28.7	1.5	29.6	-	-	-	-	-
		40.70	84.5	62.9	16.7	-	6.8	8.8	2.4	27.5	1.6	36.2	-	-	-	-	-
2	53.5-63.0	55.20	82.5	62.4	19.5	-	5.2	14.9	-	37.5	9.1	13.8	-	-	-	-	-
3	72.5-82.0	74.70	80.9	58.9	21.4	-	3.5	14.7	-	35.4	8.1	15.4	-	-	1.5	-	-
5	91.5-101.0	93.90	79.9	56.1	18.7	-	4.9	10.7	-	41.8	9.3	13.5	-	-	1.0	-	-
7	120.0-129.5	122.60	NR <sup>a</sup>	NR	21.1	-	5.3	15.3	-	36.5	7.6	12.9	-	-	1.3	-	-
8	139.0-148.5	141.60	84.9	57.4	24.3	33.5	5.4	14.4	-	7.7	1.4	11.1	-	1.5	0.7	-	-
10	196.0-205.5	204.10	78.8	45.5	13.9	16.6	4.5	8.1	-	40.5	6.9	8.5	-	-	1.0	-	-
14	291.0-300.5	291.80	82.9	-16.9	4.4	78.2	-	-	-	9.1	1.0	-	6.3	-	-	1.0	-
17	376.5-386.0	377.30	71.0	32.4	18.4	-	2.7	1.9	-	16.6	2.3	50.9	-	-	-	-	7.2
18	405.0-414.5	406.10	65.1	23.4	48.8	-	-	-	-	10.8	1.7	38.7	-	-	-	-	-
19	443.0-452.5	446.80	66.3	33.7	45.4	-	-	-	-	15.5	1.4	20.1	-	-	-	-	17.6
21	509.5-512.5	512.10	60.6	23.2	81.3	-	-	-	-	7.6	-	11.1	-	-	-	-	-

NR = Not reported.

TABLE 8  
Leg 29, Hole 281

No.	Core Depth	Sample Depth Below Sea Floor	Diff.	Amor.	Calc.	Quar.	K-Fe.	Plag.	Kaol.	Mica.	Chlo.	Mont.	Mixl.	Clin.	Pyri.	Gyps.	Apat.	Bari.	Hali.	U-1
<b>Bulk</b>																				
2	7.5-17.0	8.80	45.2	-8.1	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	17.0-26.5	25.20	45.3	-7.9	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	45.5-55.0	52.30	44.2	-10.1	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	74.0-83.5	75.10	43.2	-12.0	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	83.5-93.0	90.50	42.2	-14.0	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	93.0-102.5	99.80	46.2	-6.1	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	T
12	102.5-112.0	109.60	42.7	-13.0	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	112.0-121.5	119.30	66.2	26.7	4.0	50.0	15.3	6.5	-	-	0.8	-	21.1	-	-	-	-	2.4	-	-
14	121.5-131.0	122.10	69.9	41.1	17.1	53.2	7.6	6.7	-	13.4	0.9	-	-	-	1.2	-	-	-	-	-
15	131.0-140.5	133.80	77.2	54.4	62.0	19.4	2.3	2.5	-	11.1	0.8	-	-	1.8	-	-	-	-	-	-
16	140.5-150.0	144.70	78.2	56.3	79.7	6.9	-	1.6	-	9.6	1.0	-	-	1.2	-	-	-	-	-	-
<b>2-20<math>\mu</math> Fraction</b>																				
6	45.5-55.0	52.30	NR	NR	-	53.0	-	8.9	-	24.7	-	-	-	-	-	-	-	13.4	-	-
9	74.0-83.5	75.10	NR	NR	-	38.8	-	10.7	-	-	-	-	-	-	-	-	-	50.5	-	-
11	93.0-102.5	99.80	NR	NR	-	39.1	15.8	12.7	-	18.9	4.3	-	-	-	-	-	-	9.2	-	-
13	112.0-121.5	119.30	71.9	34.4	-	24.5	3.3	6.4	-	41.9	5.3	-	12.8	-	-	-	5.8	-	-	-
14	121.5-131.0	122.10	87.3	73.7	-	42.6	4.8	8.5	-	33.6	3.3	-	-	7.3	-	-	-	-	-	-
15	131.0-140.5	133.80	92.1	84.0	-	42.6	5.4	10.8	-	27.3	3.7	-	-	10.3	-	-	-	-	-	-
16	140.5-150.0	144.70	95.8	91.5	-	40.0	5.8	9.7	-	31.6	7.1	-	-	5.7	-	-	-	-	-	-
<b>&lt;2<math>\mu</math> Fraction</b>																				
2	7.5-17.0	8.80	NR	NR	-	36.2	-	6.0	10.4	28.2	2.3	14.1	-	-	-	-	-	2.7	-	-
3	17.0-26.5	25.20	NR	NR	-	20.2	-	2.6	23.3	20.8	-	33.1	-	-	-	-	-	-	-	-
6	45.5-55.0	52.30	95.8	90.0	-	19.3	-	5.1	12.4	11.8	-	45.3	-	-	-	-	-	6.1	-	-
9	74.0-83.5	75.10	NR	NR	-	15.5	-	8.3	10.2	10.6	-	33.0	-	-	-	-	-	15.2	7.2	-
10	83.5-93.0	90.50	NR	NR	-	18.3	-	11.2	7.3	16.4	-	39.2	-	-	-	-	-	5.0	2.5	-
11	93.0-102.5	99.80	NR	NR	-	16.0	9.5	10.7	-	25.6	5.3	17.8	-	-	-	-	-	12.8	2.4	-
12	102.5-112.0	109.60	NR	NR	-	9.3	-	-	-	18.0	2.2	36.1	-	20.3	-	-	-	10.7	3.4	-
13	112.0-121.5	119.30	79.2	13.7	-	-	-	-	-	1.9	-	91.2	-	-	-	-	6.9	-	-	-
14	121.5-131.0	122.10	93.5	85.5	-	14.1	-	4.6	7.7	27.9	4.7	21.3	-	-	16.4	3.2	-	-	-	-
15	131.0-140.5	133.80	96.0	91.1	-	13.3	-	6.3	9.3	19.5	4.3	25.1	-	-	20.4	1.8	-	-	-	-
16	140.5-150.0	144.70	95.1	88.7	-	13.8	-	4.5	6.7	20.6	3.2	34.1	-	-	14.3	2.8	-	-	-	-

U-1 peaks at 5.76 Å, 3.63 Å, and 8.12 Å among others. T = trace; NR = Not reported.

Mixl = broad peaks at 10.1 Å, 3.34 Å, 2.58 Å, 1.995 Å, 1.513 Å, and 1.656 Å among others. Mineral is a mixed layer mica-monimcrillonite.

<sup>a</sup>NR = not reported.

TABLE 9  
Leg 29, Hole 281A

No.	Core Depth	Sample Depth Below Sea Floor	Diff.	Amor.	Calc.	Quar.	Plag.	Kaol.	Mica.	Mont.	Gyps.	Bari.	Hali.
<b>Bulk</b>													
3	36.0-45.5	38.70	43.6	-11.2	99.7	0.3							
<b>&lt;2<math>\mu</math> Fraction</b>													
3	36.0-45.5	38.70	NR	NR		16.7	3.8	22.8	13.3	36.2	1.1	5.1	1.0

NR = not reported.

TABLE 10  
Leg 29, Hole 282

No.	Core Depth	Sample Depth Below Sea Floor	Diff.	Amor.	Calc.	Arag.	Quar.	K-Fe.	Plag.	Kaol.	Mica.	Chlo.	Mont.	Clin.	Pyri.	Gyps
<b>Bulk</b>																
1	0.0-9.0	3.80	60.8	19.2	71.1	19.4	5.7	—	—	1.0	1.7	—	1.0	—	—	—
4	28.0-34.0	30.20	68.2	31.7	49.7	—	15.2	—	—	7.3	8.4	—	19.4	—	—	—
5	53.5-56.5	55.70	72.4	41.1	33.7	6.9	24.1	2.1	1.7	6.7	9.9	—	13.4	—	1.5	—
		56.00	69.6	34.9	35.8	—	23.7	1.4	2.3	6.1	9.6	—	20.2	—	1.0	—
		56.50	68.9	32.8	36.5	—	21.8	2.1	2.9	4.5	12.3	—	19.9	—	—	—
7	66.0-75.5	67.90	66.9	32.1	37.0	—	31.3	2.9	4.1	4.4	7.2	—	11.8	1.3	—	—
8	75.5-85.0	77.60	69.7	37.1	27.1	—	33.7	2.3	7.1	4.5	8.9	—	15.5	0.9	—	—
9	85.0-94.5	87.60	68.7	35.7	28.6	—	35.6	3.1	6.0	4.6	8.6	—	12.5	0.9	—	—
11	104.0-113.5	109.00	75.2	44.6	9.5	2.4	26.3	2.7	3.7	12.0	11.1	—	26.9	0.9	4.3	—
		113.50	74.5	44.8	6.5	—	36.3	1.8	4.3	13.0	16.5	—	16.8	—	4.8	—
12	113.5-123.0	117.30	69.9	37.4	36.4	—	30.1	2.1	3.1	5.7	10.4	—	12.2	—	—	—
13	132.5-142.0	136.60	67.4	26.7	8.9	—	26.3	3.6	7.1	6.8	15.9	—	29.5	0.9	—	1.0
14	161.0-170.5	164.80	66.5	25.9	16.4	—	22.6	6.3	4.8	7.3	12.9	—	26.1	0.9	—	2.7
15	189.5-199.0	191.30	64.9	30.0	41.7	3.1	35.6	—	2.1	2.4	5.2	—	5.5	3.0	1.3	—
		199.00	68.5	36.6	1.8	—	54.7	—	2.8	6.7	12.5	—	5.9	9.8	5.7	—
16	218.0-227.5	218.60	67.7	34.8	5.1	—	46.8	1.5	3.1	5.4	15.1	—	2.2	17.5	3.2	—
17	256.0-265.5	259.80	70.6	38.2	21.3	—	27.1	2.2	—	8.4	13.5	—	8.6	15.9	3.0	—
18	294.0-298.0	295.10	68.6	34.0	11.0	—	32.0	1.9	1.2	10.1	14.4	—	8.8	17.6	3.1	—
<b>2-20<math>\mu</math> Fraction</b>																
1	0.0-9.0	3.70	NR	NR	—	—	63.0	5.7	10.3	2.8	13.8	0.9	—	1.1	2.3	—
4	28.0-34.0	30.20	59.3	16.8	—	—	55.3	4.9	4.7	8.4	18.3	0.9	6.0	1.6	—	—
5	53.5-56.5	55.70	65.3	29.3	—	—	54.6	2.7	5.5	8.2	21.9	—	—	3.9	3.1	—
		56.00	64.4	28.3	—	—	58.9	4.0	5.5	7.5	19.2	—	—	—	4.9	—
		56.50	66.5	26.3	—	—	39.8	3.7	5.4	5.4	24.3	1.1	20.3	—	—	—
7	66.0-75.5	67.90	64.9	29.2	—	—	56.0	5.0	8.0	4.3	15.2	0.8	7.1	2.6	1.0	—
8	75.5-85.0	77.60	64.1	26.6	—	—	53.8	3.6	9.0	6.2	14.4	—	10.0	1.4	1.7	—
9	85.0-94.5	87.60	65.7	29.4	—	—	53.1	5.0	7.7	6.5	16.4	—	9.2	2.1	—	—
11	104.0-113.5	109.00	63.1	23.8	—	—	45.8	4.0	8.5	8.0	14.0	—	9.3	2.5	7.7	—
		113.50	61.9	21.4	—	—	47.2	4.2	8.4	9.2	16.5	—	6.5	1.2	6.8	—
12	113.5-123.0	117.30	66.8	31.3	—	—	52.1	3.3	7.0	8.8	19.8	—	6.7	2.4	—	—
13	132.5-142.0	136.60	63.3	27.0	—	—	59.1	4.8	9.5	5.4	17.1	—	—	2.3	1.8	—
14	161.0-170.5	164.80	63.1	25.0	—	—	53.6	4.8	9.6	7.1	15.3	—	6.9	2.7	—	—
15	189.5-199.0	191.30	62.1	23.4	—	—	45.2	3.4	6.1	5.2	17.0	—	—	17.5	5.7	—
		199.00	57.5	12.2	—	—	34.3	2.3	3.8	7.0	19.3	—	—	24.9	8.4	—
16	218.0-227.5	218.60	60.5	17.9	—	—	29.1	1.9	3.6	7.6	19.5	—	—	31.5	6.9	—
17	256.0-265.5	259.80	61.5	20.7	—	—	32.8	2.4	2.9	7.0	17.7	—	—	29.9	7.4	—
18	294.0-298.0	295.10	58.7	15.5	—	—	33.9	2.0	2.7	6.6	16.0	—	—	32.1	6.8	—
<b>&lt;2<math>\mu</math> Fraction</b>																
1	0.0-9.0	3.70	82.2	57.5	—	—	16.5	—	2.5	23.8	23.3	1.4	31.1	—	1.2	—
4	28.0-34.0	30.20	76.8	39.2	—	—	6.6	—	—	19.6	5.1	—	68.7	—	—	—
5	53.5-56.5	55.70	75.2	35.5	—	—	7.6	—	—	18.4	6.8	—	65.7	—	1.5	—
		56.00	71.7	25.9	—	—	5.9	—	—	21.4	5.9	—	66.8	—	—	—
		56.50	75.2	33.7	—	—	6.0	—	—	12.5	4.3	—	77.2	—	—	—
7	66.0-75.5	67.90	74.5	34.2	—	—	7.4	—	1.6	17.0	7.1	—	64.4	2.5	—	—
8	75.5-85.0	77.60	75.1	34.8	—	—	7.6	—	—	16.2	7.1	—	68.0	1.1	—	—
9	85.0-94.5	87.60	80.2	49.7	—	—	10.4	—	1.8	17.6	10.2	—	58.0	2.0	—	—
11	104.0-113.5	109.00	75.9	41.2	—	—	15.9	2.2	2.3	20.7	10.6	—	46.8	—	1.5	—
		113.50	76.7	41.7	—	—	9.8	—	—	19.9	6.1	1.8	60.3	—	2.1	—
12	113.5-123.0	117.30	77.7	43.2	—	—	9.5	—	1.9	18.9	5.6	—	62.6	1.5	—	—
13	132.5-142.0	136.60	75.3	35.5	—	—	8.0	—	—	17.9	5.8	—	68.2	—	—	—
14	161.0-170.5	164.80	76.2	38.1	—	—	9.2	—	—	17.1	6.1	—	67.6	—	—	—
15	189.5-199.0	191.30	78.0	45.0	—	—	7.9	—	—	25.4	9.4	—	50.3	5.5	1.5	—
		199.00	82.8	58.6	—	—	12.3	—	—	29.2	12.3	—	36.6	5.3	4.3	—
16	218.0-227.5	218.60	80.2	53.1	—	—	11.1	—	—	28.3	13.1	1.3	34.5	7.7	4.0	—
17	256.0-265.5	259.80	80.9	53.8	—	—	7.6	—	—	39.4	9.8	—	35.8	6.1	1.4	—
18	294.0-298.0	295.10	76.8	43.3	—	—	7.8	—	—	38.5	11.8	—	37.0	5.0	—	—

<sup>a</sup>NR = not reported.

TABLE 11  
Leg 29, Hole 283

Core No.	Depth	Sample Depth Below Sea Floor	Diff.	Amor.	Calc.	Quar.	Cris.	K-Fe.	Plag.	Kaol.	Mica.	Chlo.	Mont.	Trid.	Clin.	Pyri.	Gyps.	Hali.	U-2
<b>Bulk</b>																			
2	10.0-19.5	11.80	77.6	52.4	-	43.2	-	7.0	7.0	8.6	25.2	-	6.4	-	1.4	-	1.1		
5	86.0-95.5	88.50	80.2	55.0	-	29.3	-	2.9	4.4	8.4	20.3	-	28.3	-	-	3.8	2.5		
6	124.0-133.5	126.20	78.8	53.3	17.1	25.3	-	-	5.1	6.0	19.0	1.8	23.8	-	-	1.8	-		
7	152.5-162.0	160.90	75.7	46.9	28.6	22.4	-	1.3	3.2	5.6	15.4	1.1	22.4	-	-	-	-		
8	190.5-200.0	192.60	73.5	35.5	-	21.1	-	2.4	4.4	4.5	19.3	-	47.1	-	-	-	-	1.2	
9	219.0-228.5	221.20	70.3	31.1	-	27.0	-	1.7	3.8	4.3	25.9	1.9	33.7	-	-	-	-	1.6	
11	276.0-285.5	278.30	75.2	22.4	-	12.2	23.2	2.1	2.0	3.3	13.0	-	42.8	1.5	-	-	-	-	
12	323.5-333.0	325.80	72.2	10.1	-	19.1	35.7	3.8	3.5	1.3	31.2	1.1	-	2.7	-	0.9	0.8		
13	371.0-380.5	373.30	66.1	19.8	-	26.1	-	1.8	-	-	23.6	2.4	42.0	-	-	2.7	1.4		
14	428.0-437.5	431.60	62.8	17.9	-	43.2	-	3.4	1.2	-	19.6	1.2	28.7	-	-	1.6	1.1		
15	485.0-495.5	487.30	59.8	14.7	-	56.1	-	3.8	-	-	19.5	1.1	19.5	-	-	-	-		
16	542.0-551.5	544.50	64.7	24.8	-	52.4	-	1.5	-	-	14.3	2.2	27.8	-	-	1.8	-		
17	570.5-580.0	575.90	76.3	50.3	1.5	38.4	-	10.0	3.1	-	29.5	5.5	8.8	-	-	1.5	1.7		
<b>2-20<math>\mu</math> Fraction</b>																			
2	10.0-19.5	11.80	58.6	13.1	-	49.3	-	6.6	6.6	4.9	30.7	-	-	-	1.8	-	-		
5	86.0-95.5	88.50	78.4	54.0	-	40.8	-	3.4	5.6	4.8	24.1	1.7	11.7	-	-	8.0	-		
6	124.0-133.5	126.20	79.2	56.9	-	46.9	-	3.9	7.6	7.9	22.1	1.7	6.3	-	-	3.6	-		
7	152.5-162.0	160.90	74.1	44.8	-	40.8	-	4.3	7.7	7.0	30.1	1.8	6.0	-	-	2.2	-		
8	190.5-200.0	192.60	72.3	40.6	-	40.8	-	5.6	7.8	4.6	31.4	1.3	6.6	-	-	1.9	-		
9	219.0-228.5	221.20	64.4	24.3	-	44.7	-	6.1	5.5	3.5	31.3	1.7	5.4	-	-	1.9	-		
11	276.0-285.5	278.30	69.0	24.1	-	30.1	8.4	4.3	4.7	2.6	33.7	1.4	13.6	1.2	-	-	-		
12	323.5-333.0	325.80	67.3	21.9	-	32.9	10.0	5.0	4.8	-	31.0	3.2	10.0	1.3	-	1.9	-		
13	371.0-380.5	373.30	59.9	11.5	-	36.5	-	5.1	2.1	-	38.2	1.9	8.0	-	-	8.3	-		
14	428.0-437.5	431.60	58.2	8.6	-	39.2	-	5.2	4.2	-	36.4	2.3	9.7	-	-	3.0	-		
15	485.0-495.5	487.30	57.4	10.0	-	49.9	-	5.1	2.7	-	29.3	2.0	8.5	-	-	2.5	-		
16	542.0-551.5	544.50	60.2	14.9	-	42.7	-	4.3	3.8	-	33.1	3.5	9.8	-	-	2.9	-		
17	570.5-580.0	575.90	58.1	11.8	-	41.4	-	13.8	3.0	-	35.7	4.2	-	-	-	1.9	-		
<b>&lt;2<math>\mu</math> Fraction</b>																			
2	10.0-19.5	11.80	81.9	55.8	-	12.5	-	4.6	4.4	22.3	16.9	-	39.4	-	-	-	-		
5	86.0-95.5	88.50	82.0	54.3	-	8.7	-	-	1.5	9.6	11.8	2.4	63.3	-	-	2.6	-		
6	124.0-133.5	126.20	81.4	51.9	-	7.8	-	-	-	12.8	9.4	1.5	66.9	-	-	1.5	-		
7	152.5-162.0	160.90	80.8	49.1	-	7.6	-	-	-	12.9	6.6	-	72.8	-	-	-	-		
8	190.5-200.0	192.60	78.8	44.8	-	5.4	-	-	-	5.4	6.9	-	77.0	-	-	-	-	5.3	
9	219.0-228.5	221.20	77.7	48.5	-	13.4	-	-	2.8	6.0	21.2	1.9	44.4	-	-	-	-	10.4	
11	276.0-285.5	278.30	80.4	36.8	-	4.1	32.2	-	-	4.1	7.9	-	37.7	2.7	-	-	-	11.2	
12	323.5-333.0	325.80	75.6	30.3	-	9.9	24.1	-	2.0	-	24.2	1.5	26.1	1.8	-	-	-	10.5	
13	371.0-380.5	373.30	73.7	41.4	-	27.1	-	-	-	-	15.8	0.9	44.5	-	-	-	-	11.7	
14	428.0-437.5	431.60	66.8	28.5	-	39.2	-	5.9	2.4	-	24.8	1.0	19.9	-	-	1.6	-	5.2	
15	485.0-495.5	487.30	66.1	31.6	-	58.6	-	-	-	-	15.2	-	18.1	-	-	-	-	8.1	
16	542.0-551.5	544.50	68.4	35.0	-	50.1	-	-	-	-	18.7	2.2	21.6	-	-	-	-	7.5	P
17	570.5-580.0	575.90	83.3	65.3	-	28.8	-	10.6	3.6	0.2	23.2	3.9	19.0	-	-	-	-	10.8	

U-2 = Narrow peaks at 6.87 Å, 8.22 Å, and 4.75 Å among others. P = present.

TABLE 12  
Leg 29, Hole 283A

No.	Core Depth	Sample Depth Below Sea Floor	Diff.	Amor.	Quar.	K-Fe.	Plag.	Kaol.	Mica.	Mont.	Gyps
<b>Bulk</b>											
2	11.0-20.5	14.60	79.7	55.1	34.5	5.8	7.1	8.6	23.8	18.4	1.9
<b>2-20<math>\mu</math> Fraction</b>											
2	11.0-20.5	14.60	61.6	18.7	48.8	5.9	7.2	4.1	34.0		
<b>&lt;2<math>\mu</math> Fraction</b>											
2	11.0-20.5	14.60	86.9	68.7	15.4	7.0	7.5	17.0	17.5	35.6	

TABLE 13  
Leg 29, Hole 284

No.	Core Depth	Sample Depth Below Sea Floor	Diff.	Amor.	Calc.	Quar.	K-Fe.	Plag.	Kaol.	Mica.	Chlo.	Clin.	Mont.	Pyri.	Gyps.	Amph.
<b>Bulk</b>																
1	0.0-8.5	2.70	47.1	-6.1	88.7	1.6		3.1		6.6						
3	18.0-27.5	20.30	47.8	-4.6	90.9	1.8		1.3		6.0						
5	37.0-46.5	41.00	48.4	-2.8	93.2	1.6		1.2		4.0						
6	46.5-56.0	48.60	46.4	-6.7	93.6	1.5		1.2		3.7						
7	56.0-65.5	58.10	44.8	-9.6	96.3	1.3				2.4						
9	75.0-84.5	77.20	44.2	-10.4	98.3	0.5				1.2						
10	84.5-94.0	86.60	43.2	-12.0	99.6	0.4										
11	94.0-103.5	96.20	42.3	-13.8	99.6	0.4										
12	103.5-113.0	107.20	42.8	-12.8	99.7	0.3										
13	113.0-122.5	116.60	43.3	-11.8	99.6	0.4										
14	122.5-132.0	124.70	41.3	-15.8	100.0											
16	141.5-151.0	143.70	41.8	-14.7	99.4	0.6										
17	151.0-160.5	153.20	41.8	-14.8	100.0											
19	170.0-179.5	171.90	43.0	-12.4	99.6	0.4										
21	189.0-198.5	191.10	39.6	-19.1	100.0											
22	198.5-208.0	206.60	40.7	-17.0	100.0											
<b>2-20<math>\mu</math> Fraction</b>																
1	0.0-8.5	2.70	62.9	22.7		26.6	-	26.7	-	40.7	4.8	-		-		1.2
3	18.0-27.5	20.30	61.8	20.7		28.9	-	24.8	-	40.8	5.4	-		-		-
5	37.0-46.5	41.00	68.8	35.6		26.8	-	28.9	-	39.2	5.1	-		-		-
6	46.5-56.0	48.60	63.1	25.7		30.5	-	32.3	-	32.4	4.8	-		-		-
7	56.0-65.5	58.10	61.3	22.0		34.4	4.3	26.6	-	29.2	4.1	-		1.4		-
9	75.0-84.5	77.20	NR	NR		34.5	5.9	26.7	-	26.5	4.6	-		1.7		-
10	84.5-94.0	86.60	NR	NR		43.1	11.1	26.5	-	15.5	2.2	-		1.5		-
11	94.0-103.5	96.20	NR	NR		39.9	7.4	27.9	-	18.0	5.1	-		1.6		-
12	103.5-113.0	107.20	NR	NR		36.6	14.8	23.8	-	20.7	2.8	-		1.3		-
13	113.0-122.5	116.60	NR	NR		36.5	9.7	20.3	-	28.0	4.6	-		0.9		-
14	122.5-132.0	124.70	NR	NR		39.9	5.9	28.4	-	20.7	5.1	-		-		-
16	141.5-151.0	143.70	NR	NR		27.7	6.3	21.1	2.3	36.4	6.2	-		-		-
17	151.0-160.5	153.20	NR	NR		34.0	5.5	28.4	-	25.1	5.2	-		1.9		-
19	170.0-179.5	171.90	NR	NR		26.9	4.9	23.9	-	35.4	7.3	-		1.7		-
22	198.5-208.0	206.60	NR	NR		32.9	4.5	29.7	-	25.3	6.7	1.0		-		-
<b>&lt;2<math>\mu</math> Fraction</b>																
1	0.0-8.5	2.70	80.1	56.7		16.2	-	12.9	-	58.8	11.0		1.1	-	-	-
3	18.0-27.5	20.30	81.5	59.7		17.2	-	14.2	5.1	48.3	8.9		6.3	-	-	-
5	37.0-46.5	41.00	82.4	61.8		15.3	4.6	16.0	4.2	46.2	8.7		5.1	-	-	-
6	46.5-56.0	48.60	79.6	56.3		14.6	5.1	17.2	-	52.6	10.4		-	-	-	-
7	56.0-65.5	58.10	84.6	65.9		17.4	4.8	14.9	7.6	45.9	5.5		3.8	-	-	-
9	75.0-84.5	77.20	87.7	73.8		16.9	7.0	14.3	7.1	45.3	9.3		-	-	-	-
10	84.5-94.0	86.60	NR	NR		23.4	5.7	15.3	6.6	41.4	6.1		-	-	1.6	-
11	94.0-103.5	96.20	NR	NR		19.4	6.2	15.2	8.2	44.8	4.6		-	-	1.6	-
12	103.5-113.0	107.20	NR	NR		19.9	7.3	15.8	6.4	41.1	5.9		-	-	3.5	-
13	113.0-122.5	116.60	94.4	88.1		21.8	8.1	14.3	9.2	37.8	4.6		-	-	4.2	-
14	122.5-132.0	124.70	NR	NR		21.2	5.2	21.2	6.3	36.3	6.0		-	-	3.9	-
16	141.5-151.0	143.70	NR	NR		25.0	4.6	18.6	12.7	29.1	2.7		-	3.3	3.9	-
19	170.0-179.5	171.90	91.8	82.6		18.7	3.6	16.4	4.1	40.6	8.4		5.3	1.8	1.1	-
21	189.0-198.5	191.10	96.7	93.1		21.4	6.8	18.7	-	40.7	7.3		-	1.8	3.3	-
22	198.5-208.0	206.60	93.5	85.6		15.9	4.0	13.4	5.5	45.4	7.4		8.3	-	-	-

NR - Not Reported.

Mica - Unusual peak intensities throughout the hole. The peak at 4.98 Å is 1.4 times its usual deep sea intensity as compared to the 9.93 Å intensity peak. A peak not normally present in deep sea mica at approx. 3.31 Å is approx. equal in intensity to the 9.93 Å peak.

TABLE 14  
Leg 29, Hole 284A

Core No.	Core Depth	Sample Depth Below Sea Floor	Diff.	Amor.	Calc.	Quar.	K-Fe.	Plag.	Kaol.	Mica.	Chlor.	Mont.
<b>Bulk</b>												
2	27.5-37.0	29.70	47.5	-5.3	91.0	1.8		1.1		6.1		
<b>2-20<math>\mu</math> Fraction</b>												
2	27.5-37.0	29.70	61.5	17.4		20.7	3.3	21.6		48.2	6.2	
<b>&lt;2<math>\mu</math> Fraction</b>												
2	27.5-37.0	29.70	87.0	71.5		17.1	3.0	17.4	5.2	44.2	6.4	6.6

Mica - Unusual peak intensities throughout the hole. The peak at 4.98 Å is 1.4 times its usual deep sea intensity as compared to the 9.93 Å intensity peak. A peak not normally present in deep sea mica at approx. 3.31 Å is approx. equal in intensity to the 9.93 Å peak.