

**Supplemental Table 2.** Mineralogy of core tops and sediment grabs. Total clay is the sum of muscovite, kaolinite, illite-smectite, montmorillonite, chlorite, and Illite.

Core Name	Quartz	Anorthite	Halite	Microcline	Calcite	Muscovite	Kaolinite	Illite-	Aragonite	Mg-calcite	Montmo-	Chlorite	Gypsum	Illite	Albite	Total
	%	%	%	%	%	%	%	smectite	%	%	rillonite	%	%	%	%	Clay
FR 5/90-PC7	8	2	1	0	15	4	2	4	28	34	2	0	0	0		12
FR 5/90-PC8	7	3	0	0	21	3	2	3	28	28	1	1	1	1		11
FR 5/90-PC10a	10	2	1	1	23	4	4	4	23	20	1	1	3	5		19
FR 5/90-PC13	10	2	0	3	38	8	5	6	19	7	1	1	0	0		21
FR 5/90-PC15	6		4		68		3	5	10	3	1					9
FR 5/90-PC16a	18	1	2	1	29	4	1	1	23	17	1	1	2	1		9
FR 5/90-PC23	6	5	1	1	26	7	3	5	26	13	6	0	0	0		21
FR 5/90-PC24a	6	1	2	2	28	5	2	6	29	20	1	0	0	0		14
FR 5/90-PC27a	12	0	0	1	31	6	4	3	26	11	1	1	1	4		19
FR 5/90-PC29	8	4	4	0	27	6	3	4	26	17	0	1	0	0		14
FR 4/92-SC3	48	0	1	4	4	1	2	4	12	19	0				3	7
FR 4/92-SC7	53	1	1	1	5	1	2		15	17	2				3	5
FR 4/92-SC11	50	1	2	0	6	3	2		14	19	0				3	5
FR 4/92-SC14	50	3	1	2	6	0	1		12	24	1				1	2
FR 4/92-SC18	32	0	1	1	11	1	2		19	30	0				3	3
FR 4/92-SC22	14	0	1	3	8	0	1		26	39	5				4	6
FR 4/92-PC1c	4	2	0	2	3	3	1	2	50	29	0	1	1	0		7
FR 4/92-PC3	3	2	2	0	27	2	1	1	31	27	4	1	0	0		9
FR 4/92-PC4	2	1	0	0	50	2	1	1	30	10	0	1	0	0		5
FR 4/92-PC5	1	2	1	0	51	3	1	2	27	11	0	1	0	0		7
FR 4/92-PC6	1	1	0	0	43	3	1	2	33	15	1	1	0	0		8
FR 4/92-PC7	3	2	3	1	66	2	2	2	15	3	0	1	0	0		7
FR 4/92-PC8	9	5	0	0	23	3	2	3	39	13	1	1	0	0		10
FR 4/92-PC9	5	4	1	0	53	0	3	13	18	4	0	0	0	0		16
FR 4/92-PC10	3	3	3	0	55	0	1	9	18	7	0	0	0	0		10
FR 4/92-PC11	2	1	2	0	49	0	1	11	23	11	0	0	0	0		12
FR 4/92-PC12	4	0	2	0	55	4	2	3	26	4	1	0	0	0		10
FR 4/92-PC13	5	4	2	0	48	0	2	6	26	8	0	0	0	0		8
FR 4/92-PC14	5	2	1	0	49	5	2	4	28	4	1	0	0	0		12
FR 4/92-PC15	7	3	1	0	40	6	3	4	30	6	1	0	0	0		14
FR 4/92-PC16	4	3	2	0	26	2	5	1	29	25	4	1	0	0		13
FR 4/92-PC22a	4	4	1	0	10	1	1	4	32	38	4	1	0	0		11

FR 4/92-PC24a	5	4	1	1	13	1	1	2	32	37	2	1	0	0	7
FR 4/92-PC25	6	3	1	0	27	3	2	2	28	22	5	1	0	0	13
FR 4/92-PC30	9	4	2	0	24	0	4	18	18	20	0	0	0	0	22
FR 4/92-PC31	2	2	2	0	59	2	1	3	22	6	1	0	0	0	7
FR 4/92-PC32	2	1	2	1	44	3	1	2	32	11	0	0	0	0	6
FR 4/92-PC33	4	2	1	1	51	3	2	2	25	10	0	0	0	0	7
FR 4/92-PC34	9	2	2	0	36	6	3	3	30	8	0	0	0	0	12
FR 4/92-PC35	10	6	2	2	33	4	3	3	22	8	6	1	0	0	17
FR 4/92-PC36	5	1	1	2	71	2	2	1	13	1	1	0	0	0	6
FR 4/92-PC37	2	1	1	1	76	2	1	1	14	3	0	0	0	0	4
FR 4/92-PC38	2	3	3	0	67	0	2	8	11	6	0	0	0	0	10
FR 4/92-PC39	2	1	1	1	65	3	1	4	17	4	1	0	0	0	9
FR 4/92-PC40	2	0	2	0	63	2	1	2	17	10	0	0	0	0	5
FR 4/92-PC41	0	2	2	0	20	1	1	1	34	38	0	1	0	0	4
FR 4/92-PC42	2	3	4	0	57	0	1	2	17	10	3	0	0	0	6
FR 4/92-PC44	0	0	1	0	8	1	1	3	41	43	0	1	0	1	7
1158 K1482	11	6	3	1	25	2	1	3	22	26	1	0	1	0	7
1158 G1479	3	2	2	1	10	1	1	4	23	53	0	1	0	0	7
1158 K1481	12	6	2	0	22	3	2	1	24	28	1	1	1	0	8
1158 K1483	8	1	2	1	16	1	1	4	30	35	1	1	0	0	8
1158 K1484	3	1	5	1	29	2	2	5	29	23	1	0	0	0	10
708 G1291	1		2		8	1	1	1	37	49	0				3
708 G1292	0		1		2	2	1	1	53	39	0				4
708 G1294	1		2		4	2	3	3	50	35	0				8
2393 G5	5		4		32		1	3	29	28					4
2393 G6	6		4		46		1	4	24	16					5
2393 G7	2		5		44		1	2	34	12					3
2393 G8	1		1		42		1	2	32	20					3
2393 G9	1		3		38		1	2	30	25					3