12. GRAIN SIZE ANALYSES, LEG 9

R. E. Boyce, Scripps Institute of Oceanography, La Jolla, Calif.

Sand-silt-clay percentages were determined from 10cc sediment samples which were collected every 1.5 meters along each core, or where significant lithology variations occurred. These results are reported in Table 1 and with the lithology data in each drilling site chapter.

Grain size distribution was determined by standard sieving and pipette analysis. The sediment sample was dried then dispersed in calgon solution. If the sediment failed to disaggregate in calgon, it was dispersed in hydrogen peroxide. The sand-size fraction was separated by a 62.5-micron sieve with the fines being processed by standard pipette analysis following Stokes settling velocity equation (Krumbein and Pettijohn, 1938, p. 95-96):

$$\frac{D}{t} = V = \frac{2(d_1 - d_2)\,gr^2}{9\eta}$$

$$t = \frac{9D\eta}{2gr^2(d_1 - d_2)}$$

where

V = velocity in cm/sec

*t = time in seconds

D = depth pipette is inserted, in cm

*g = gravity in cm/sec^2

*r = radius of individual particles, in cm

d_1 = density of solid particles arbitrarily set at 2.675 gm/cc

d_2 = absolute density of distilled water at different temperatures (Hodsman *et al.*, 1960, p. 2129)

*η = viscosity of distilled water in poises at different temperatures (Hodsman *et al.*, 1960, p. 2181).

Grain diameters are expressed in *phi* units and microns. A *phi* unit is the grain diameter in millimeters expressed as the negative log to the base 2. These units and parameters are discussed in detail by Inman (1952). Sediment classification is after Shepard (1954) with the sand, silt, and clay size boundaries based on the Wentworth (1922) scale (Figure 1). Sand, silt, and clay fractions theoretically should be composed of particles with diameters within 2000 to 62.5 microns (-1.0 to 4.0 phi), 62.5 to 3.91 microns (4.0 to 8.0 phi), and less than 3.91 microns (greater than 8.0 phi), respectively.

The reproducibility of the grain size analyses was tested using splits of the same sample with a single operator:

Splits of the Same Sample	% Sand	% Silt	% Clay
(A)	5.20	48.8	46.0
(B)	5.09	48.8	46.1
(C)	5.83	47.2	46.9

However, different operators over a longer period of time have results with a wider spread reproducing the above size fractions within ±2.5 percent (absolute). For detailed step by step procedures see Volume IV of the *Initial Reports of the Deep Sea Drilling Project.*

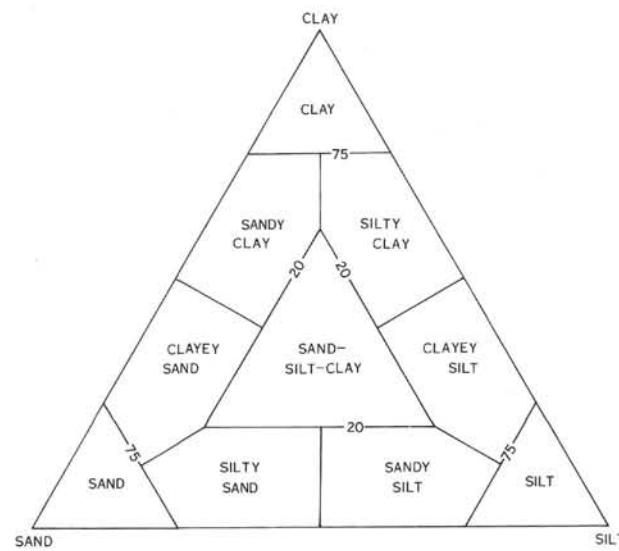

Figure 1. *Sediment classification after Shepard (1954) with the sand, silt, and clay size fractions based on the Wentworth (1922) Grade Scale: Sand, silt, and clay size particles having respective diameters of 2,000 to 62.5 microns, 62.5 to 3.91 microns, and less than 3.91 microns. Shepard's (1954) sediment classification is a function of sand, silt, and clay size percentages and not composition.*

*Five figures were used in calculations to avoid rounding off variations.

TABLE 1
Grain Size Determinations, Leg 9

Hole	Core	Section	Interval (cm)	Per Cent Sand	Per Cent Silt	Per Cent Clay	Classification
76	1	1	80.0	41.9	34.2	23.9	Sand-silt-clay
76	1	2	4.0	3.1	43.9	53.0	Silty clay
76	1	3	20.0	4.5	37.8	57.7	Silty clay
76	1	4	4.0	23.7	41.7	34.6	Sand-silt-clay
76	1	5	40.0	82.2	9.7	8.1	Sand
76	1	6	21.0	19.9	54.0	26.1	Clayey silt
76A	1	1	16.0	86.3	8.8	4.9	Sand
76A	1	2	31.0	23.5	47.0	29.5	Sand-silt-clay
76A	1	6	65.0	21.6	47.7	30.8	Sand-silt-clay
76A	2	1	64.0	89.2	6.8	4.1	Sand
76A	2	1	138.0	48.8	27.3	23.9	Sand-silt-clay
76A	2	3	20.0	23.4	45.0	31.6	Sand-silt-clay
76A	2	4	30.0	3.7	69.5	26.8	Clayey silt
76A	2	5	64.0	0.2	63.0	36.8	Clayey silt
76A	2	6	10.0	1.2	59.2	39.6	Clayey silt
76A	2	6	70.0	0.1	61.7	38.2	Clayey silt
76A	2	6	118.0	96.7	1.5	1.8	Sand
77	1	1	12.0	14.5	22.6	62.8	Silty clay
77A	1	2	20.0	20.2	31.0	48.8	Sand-silt-clay
77A	1	3	20.0	2.3	91.9	5.8	Silt
77A	1	4	10.0	18.1	26.2	55.6	Silty clay
77A	1	1	14.0	24.6	21.6	53.7	Sand-silt-clay
77A	1	5	20.0	16.2	25.3	58.5	Silty clay
77A	1	6	0.0	13.9	20.0	66.1	Silty clay
77B	1	1	16.0	4.5	18.9	76.7	Clay
77B	1	2	20.0	7.9	20.2	71.9	Silty clay
77B	1	3	20.0	13.6	21.9	64.5	Silty clay
77B	1	4	20.0	13.4	24.4	62.2	Silty clay
77B	1	5	75.0	10.0	21.0	69.0	Silty clay
77B	1	6	10.0	10.4	20.5	69.1	Silty clay
77B	2	1	31.0	11.9	25.2	62.9	Silty clay
77B	2	2	58.0	10.6	20.8	68.6	Silty clay
77B	2	3	30.0	13.3	21.0	65.7	Silty clay
77B	2	4	18.0	13.7	22.8	63.5	Silty clay
77B	2	5	10.0	10.5	24.0	65.5	Silty clay
77B	2	6	20.0	9.6	26.5	63.9	Silty clay
77B	3	1	10.0	7.4	23.1	69.5	Silty clay
77B	3	2	10.0	7.1	22.7	70.2	Silty clay

TABLE 1 – *Continued*

Hole	Core	Section	Interval (cm)	Per Cent Sand	Per Cent Silt	Per Cent Clay	Classification
77B	3	3	8.0	4.9	21.3	73.8	Silty clay
77B	3	4	20.0	3.9	22.8	73.2	Silty clay
77B	3	5	20.0	4.1	23.0	72.8	Silty clay
77B	4	1	10.0	9.1	22.6	68.3	Silty clay
77B	4	2	30.0	7.8	21.3	71.0	Silty clay
77B	4	3	30.0	10.4	23.0	66.6	Silty clay
77B	4	4	20.0	9.9	27.3	62.8	Silty clay
77B	4	5	20.0	7.3	21.6	71.1	Silty clay
77B	4	6	20.0	6.5	26.7	66.7	Silty clay
77B	5	1	20.0	6.0	19.6	74.4	Silty clay
77B	5	2	20.0	7.5	29.6	62.9	Silty clay
77B	5	3	10.0	6.2	24.8	69.1	Silty clay
77B	5	4	10.0	9.1	24.1	66.8	Silty clay
77B	5	5	10.0	8.9	26.2	64.9	Silty clay
77B	5	6	10.0	12.2	21.6	66.2	Silty clay
77B	6	1	10.0	9.7	21.0	69.3	Silty clay
77B	6	2	24.0	8.4	21.5	70.0	Silty clay
77B	6	3	0.0	8.3	21.5	70.2	Silty clay
77B	6	4	10.0	7.0	21.2	71.9	Silty clay
77B	6	5	10.0	8.8	20.1	71.1	Silty clay
77B	6	6	12.0	4.4	20.0	75.5	Clay
77B	7	1	10.0	4.2	22.3	73.5	Silty clay
77B	7	2	10.0	3.4	19.7	76.9	Clay
77B	7	3	10.0	1.4	23.1	75.5	Clay
77B	7	4	10.0	1.4	21.9	76.7	Clay
77B	7	5	10.0	3.6	15.5	80.9	Clay
77B	7	6	14.0	3.4	22.9	73.7	Silty clay
77B	8	3	10.0	2.3	20.8	76.8	Clay
77B	8	5	10.0	2.6	21.3	76.1	Clay
77B	8	6	10.0	3.4	21.2	75.3	Clay
77B	9	2	10.0	1.3	22.2	76.5	Clay
77B	9	4	10.0	2.1	21.8	76.1	Clay
77B	9	6	10.0	1.5	20.2	78.2	Clay
77B	10	2	10.0	2.1	21.5	76.4	Clay
77B	10	4	10.0	1.7	21.7	76.6	Clay
77B	10	6	16.0	0.9	21.4	77.7	Clay
77B	12	1	20.0	1.7	17.3	81.0	Clay
77B	12	6	10.0	0.6	18.9	80.5	Clay
77B	13	2	10.0	1.5	22.5	76.0	Clay

TABLE 1 – *Continued*

Hole	Core	Section	Interval (cm)	Per Cent Sand	Per Cent Silt	Per Cent Clay	Classification
77B	13	4	10.0	1.6	18.2	80.2	Clay
77B	13	6	10.0	1.8	18.3	79.9	Clay
77B	14	2	10.0	1.4	16.0	82.6	Clay
77B	14	4	10.0	0.5	83.8	15.7	Silt
77B	14	6	10.0	1.7	18.4	79.8	Clay
77B	15	2	14.0	2.1	18.1	79.9	Clay
77B	15	4	10.0	1.3	19.1	79.6	Clay
77B	15	6	10.0	1.9	23.0	75.1	Clay
77B	16	2	10.0	2.0	25.8	72.2	Silty clay
77B	16	4	10.0	1.8	23.0	75.2	Clay
77B	16	6	10.0	2.0	20.6	77.4	Clay
77B	17	1	10.0	3.0	30.1	66.9	Silty clay
77B	17	2	10.0	3.0	28.6	68.4	Silty clay
77B	17	4	20.0	1.5	27.1	71.4	Silty clay
77B	17	6	10.0	1.6	27.9	70.5	Silty clay
77B	18	2	10.0	4.6	19.8	75.5	Clay
77B	18	4	10.0	6.3	23.1	70.6	Silty clay
77B	18	6	10.0	3.7	22.2	74.2	Silty clay
77B	19	1	10.0	4.0	25.1	70.9	Silty clay
77B	19	2	28.0	4.0	32.7	63.3	Silty clay
77B	19	3	10.0	2.8	35.4	61.7	Silty clay
77B	19	5	10.0	1.9	32.5	65.6	Silty clay
77B	19	6	10.0	2.0	28.2	69.7	Silty clay
77B	20	2	10.0	2.3	27.6	70.1	Silty clay
77B	20	5	10.0	2.2	32.5	65.2	Silty clay
77B	20	6	10.0	1.9	29.9	68.2	Silty clay
77B	21	1	10.0	3.4	29.0	67.6	Silty clay
77B	21	2	10.0	1.1	23.9	75.1	Clay
77B	21	5	10.0	1.1	28.5	70.4	Silty clay
77B	22	2	10.0	2.2	31.8	66.1	Silty clay
77B	22	5	10.0	2.5	29.8	67.6	Silty clay
77B	22	6	10.0	2.4	28.3	69.3	Silty clay
77B	23	2	10.0	1.5	73.0	25.5	Clayey silt
77B	23	5	10.0	1.1	19.9	78.9	Clay
77B	23	6	10.0	1.4	26.1	72.6	Silty clay
77B	24	2	10.0	4.3	25.0	70.7	Silty clay
77B	24	5	10.0	2.3	39.0	58.7	Silty clay
77B	25	2	10.0	3.1	31.7	65.3	Silty clay
77B	25	5	10.0	4.0	39.8	56.2	Silty clay

TABLE 1 – *Continued*

Hole	Core	Section	Interval (cm)	Per Cent Sand	Per Cent Silt	Per Cent Clay	Classification
77B	25	6	10.0	2.9	41.2	55.9	Silty clay
77B	26	2	20.0	6.8	41.7	51.5	Silty clay
77B	26	5	10.0	3.8	45.3	50.8	Silty clay
77B	26	6	10.0	3.7	42.6	53.7	Silty clay
77B	27	1	12.0	3.5	43.7	52.8	Silty clay
77B	27	2	20.0	4.4	43.9	51.6	Silty clay
77B	27	5	10.0	4.3	46.2	49.5	Silty clay
77B	27	6	10.0	3.0	42.8	54.2	Silty clay
77B	28	2	40.0	2.5	47.2	50.3	Silty clay
77B	28	5	10.0	4.8	43.3	52.0	Silty clay
77B	28	6	10.0	2.4	48.4	49.1	Silty clay
77B	29	2	10.0	2.0	48.2	49.8	Silty clay
77B	29	5	10.0	0.6	45.0	54.4	Silty clay
77B	29	6	10.0	2.2	53.1	44.6	Clayey silt
77B	30	2	10.0	2.9	44.5	52.6	Silty clay
77B	30	5	10.0	1.3	34.2	64.5	Silty clay
77B	30	6	5.0	3.3	32.6	64.1	Silty clay
77B	31	2	20.0	0.7	46.8	52.5	Silty clay
77B	31	5	10.0	1.6	40.6	57.8	Silty clay
77B	31	6	10.0	0.4	46.7	52.8	Silty clay
77B	32	2	10.0	1.8	36.5	61.6	Silty clay
77B	32	5	10.0	1.1	39.7	59.2	Silty clay
77B	32	6	10.0	1.6	41.8	56.6	Silty clay
77B	33	2	5.0	1.8	45.7	52.5	Silty clay
77B	33	2	80.0	1.2	36.7	62.0	Silty clay
77B	33	5	10.0	0.9	38.9	60.2	Silty clay
77B	33	6	10.0	2.6	41.2	56.2	Silty clay
77B	34	2	10.0	1.5	51.9	46.7	Clayey silt
77B	34	5	10.0	2.7	37.5	59.8	Silty clay
77B	34	6	10.0	2.1	36.6	61.3	Silty clay
77B	36	2	10.0	2.2	54.5	43.3	Clayey silt
77B	36	3	10.0	5.6	61.0	33.4	Clayey silt
77B	37	2	10.0	1.0	24.1	74.9	Silty clay
77B	37	5	10.0	0.9	31.3	67.8	Silty clay
77B	37	6	10.0	1.0	42.3	56.8	Silty clay
77B	38	2	58.0	2.3	48.4	49.3	Silty clay
77B	39	2	15.0	2.1	37.9	60.0	Silty clay
77B	39	5	10.0	1.6	52.3	46.1	Clayey silt
77B	39	6	10.0	3.8	42.9	53.3	Silty clay

TABLE 1 – *Continued*

Hole	Core	Section	Interval (cm)	Per Cent Sand	Per Cent Silt	Per Cent Clay	Classification
77B	40	2	10.0	5.1	40.1	54.8	Silty clay
77B	40	3	10.0	1.7	33.6	64.7	Silty clay
77B	40	4	10.0	7.3	48.3	44.3	Clayey silt
77B	41	2	23.0	3.6	36.8	59.5	Silty clay
77B	41	5	10.0	3.5	42.7	53.8	Silty clay
77B	41	6	10.0	4.1	40.2	55.7	Silty clay
77B	42	2	20.0	3.4	33.4	63.1	Silty clay
77B	42	5	11.0	5.1	41.9	52.9	Silty clay
77B	42	6	10.0	4.0	41.0	55.0	Silty clay
77B	43	2	10.0	1.5	25.8	72.7	Silty clay
77B	43	5	10.0	2.9	56.5	40.5	Clayey silt
77B	43	6	10.0	3.0	34.2	62.8	Silty clay
77B	44	2	10.0	1.3	34.8	63.8	Silty clay
77B	44	5	5.0	2.0	34.8	63.3	Silty clay
77B	44	6	5.0	1.7	32.0	66.3	Silty clay
77B	45	2	10.0	1.6	31.8	66.5	Silty clay
77B	45	5	10.0	3.3	14.7	81.9	Clay
77B	45	6	10.0	3.4	37.2	59.3	Silty clay
77B	46	2	10.0	0.5	33.0	66.5	Silty clay
77B	46	5	10.0	0.5	28.5	71.0	Silty clay
77B	46	6	10.0	0.5	25.0	74.4	Silty clay
77B	47	2	10.0	2.3	54.2	43.5	Clayey silt
77B	47	4	10.0	2.6	40.8	56.6	Silty clay
77B	48	2	63.0	1.9	38.2	59.9	Silty clay
77B	48	5	10.0	1.4	39.9	58.7	Silty clay
77B	48	6	10.0	2.2	54.8	43.0	Clayey silt
77B	49	2	15.0	1.5	30.1	68.3	Silty clay
77B	49	5	40.0	1.5	28.3	70.2	Silty clay
77B	49	6	10.0	1.1	34.3	64.6	Silty clay
77B	50	2	52.0	1.3	26.9	71.7	Silty clay
77B	51	5	10.0	1.3	49.8	48.9	Clayey silt
77B	51	6	10.0	1.0	41.0	58.0	Silty clay
77B	52	1	80.0	1.5	39.1	59.3	Silty clay
77B	52	2	10.0	0.1	47.5	52.4	Silty clay
77B	53	1	62.0	0.4	42.2	57.5	Silty clay
78	1	2	10.0	0.9	34.9	64.2	Silty clay
78	1	4	10.0	1.3	40.0	58.7	Silty clay
78	1	6	10.0	1.1	31.3	67.6	Silty clay
78	2	2	10.0	2.3	43.2	54.6	Silty clay

TABLE 1 – *Continued*

Hole	Core	Section	Interval (cm)	Per Cent Sand	Per Cent Silt	Per Cent Clay	Classification
78	2	4	10.0	1.2	43.3	55.5	Silty clay
78	2	6	10.0	0.8	49.0	50.2	Silty clay
78	3	2	10.0	14.5	42.6	42.8	Silty clay
78	3	4	35.0	7.5	48.3	44.2	Clayey silt
78	3	6	20.0	7.0	49.0	44.0	Clayey silt
78	4	2	10.0	3.2	52.4	44.4	Clayey silt
78	4	4	10.0	2.3	48.2	49.5	Silty clay
78	4	6	10.0	2.7	55.5	41.8	Clayey silt
78	5	2	100.0	3.1	42.0	54.9	Silty clay
78	5	4	16.0	1.8	40.6	57.6	Silty clay
78	5	6	10.0	3.3	39.8	56.9	Silty clay
78	6	2	10.0	2.0	51.1	46.9	Clayey silt
78	6	4	10.0	1.7	44.5	53.8	Silty clay
78	6	6	10.0	2.5	38.4	59.1	Silty clay
78	7	2	10.0	9.6	37.8	52.6	Silty clay
78	7	4	10.0	6.3	40.0	53.7	Silty clay
78	7	5	10.0	9.4	38.3	52.3	Silty clay
78	8	1	78.0	1.5	32.0	66.5	Silty clay
78	9	6	10.0	7.7	41.0	51.2	Silty clay
78	10	1	10.0	4.0	40.4	55.6	Silty clay
78	10	2	10.0	5.1	41.1	53.8	Silty clay
78	10	4	10.0	3.8	39.5	56.7	Silty clay
78	10	6	10.0	3.3	37.7	58.9	Silty clay
78	11	2	10.0	6.9	45.5	47.6	Silty clay
78	11	4	10.0	4.0	43.8	52.2	Silty clay
78	11	6	10.0	3.5	47.9	48.5	Silty clay
78	12	4	10.0	0.7	6.5	92.7	Clay
78	12	6	10.0	4.0	12.8	83.2	Clay
78	13	2	0.0	2.4	16.2	81.4	Clay
78	13	4	10.0	2.1	10.6	87.3	Clay
78	13	6	10.0	1.1	9.5	89.3	Clay
78	14	4	10.0	3.5	16.8	79.7	Clay
78	14	6	10.0	2.3	12.9	84.8	Clay
78	15	4	10.0	5.1	11.8	83.2	Clay
78	15	6	10.0	2.5	22.1	75.4	Clay
78	16	4	10.0	4.8	16.1	79.1	Clay
78	16	6	0.0	1.5	18.4	80.1	Clay
78	17	2	10.0	1.6	19.0	79.4	Clay
78	17	4	10.0	2.5	13.2	84.3	Clay

TABLE 1 – *Continued*

Hole	Core	Section	Interval (cm)	Per Cent Sand	Per Cent Silt	Per Cent Clay	Classification
78	18	6	24.0	4.7	18.6	76.6	Clay
78	19	4	10.0	1.5	12.4	86.1	Clay
78	19	6	10.0	2.9	5.5	91.6	Clay
78	20	2	10.0	2.9	12.8	84.3	Clay
78	20	4	10.0	0.7	6.4	92.9	Clay
78	20	6	10.0	0.8	6.9	92.3	Clay
78	21	2	10.0	1.9	4.8	93.3	Clay
78	21	4	10.0	1.2	6.7	92.1	Clay
78	21	6	10.0	1.2	8.3	90.5	Clay
78	22	6	10.0	1.0	7.1	91.9	Clay
78	23	4	10.0	4.4	7.1	88.5	Clay
78	23	6	10.0	4.6	7.6	87.8	Clay
78	24	2	30.0	2.1	7.0	90.9	Clay
78	25	4	10.0	6.6	12.8	80.7	Clay
78	25	6	10.0	4.6	11.0	84.4	Clay
78	27	4	31.0	2.6	6.1	91.3	Clay
78	27	6	10.0	5.6	10.6	83.7	Clay
78	28	4	90.0	3.2	8.4	88.4	Clay
78	28	6	80.0	2.9	7.3	89.8	Clay
78	29	6	10.0	1.1	5.1	93.8	Clay
78	30	6	20.0	0.8	4.3	95.0	Clay
78	32	6	10.0	6.8	40.3	52.8	Silty clay
78	35	6	74.0	2.0	11.9	86.2	Clay
79	1	2	10.0	5.7	37.0	57.2	Silty clay
79	1	3	10.0	7.4	30.4	62.2	Silty clay
79	1	4	10.0	6.7	19.3	74.0	Silty clay
79	1	5	13.0	4.2	29.6	66.2	Silty clay
79	1	6	10.0	7.4	31.0	61.6	Silty clay
79	2	1	10.0	4.0	22.3	73.7	Silty clay
79	2	2	10.0	2.3	10.6	87.1	Clay
79	2	3	10.0	1.3	23.8	74.9	Silty clay
79	2	4	10.0	0.8	22.5	76.7	Clay
79	2	5	10.0	2.6	22.6	74.9	Silty clay
79	2	6	10.0	1.8	18.6	79.7	Clay
79	3	1	10.0	3.5	18.9	77.6	Clay
79	3	2	10.0	1.1	22.1	76.7	Clay
79	3	3	10.0	4.5	22.6	72.9	Silty clay
79	3	4	10.0	1.3	23.0	75.7	Clay
79	3	5	10.0	1.2	23.9	74.9	Silty clay

TABLE 1 – *Continued*

Hole	Core	Section	Interval (cm)	Per Cent Sand	Per Cent Silt	Per Cent Clay	Classification
79	3	6	10.0	2.8	25.2	72.1	Silty clay
79	4	1	10.0	1.9	32.7	65.4	Silty clay
79	4	2	10.0	2.3	28.6	69.1	Silty clay
79	4	3	10.0	1.0	30.7	68.3	Silty clay
79	4	4	10.0	1.2	25.7	73.0	Silty clay
79	4	5	10.0	3.1	30.4	66.5	Silty clay
79	5	3	12.0	0.7	29.2	70.0	Silty clay
79	5	4	10.0	2.7	28.9	68.4	Silty clay
79	5	5	10.0	2.2	28.4	69.4	Silty clay
79	5	6	10.0	0.9	24.8	74.3	Silty clay
79	6	1	94.0	3.5	33.1	63.4	Silty clay
79	6	2	10.0	2.7	34.7	62.6	Silty clay
79	6	3	10.0	2.9	33.9	63.2	Silty clay
79	6	4	10.0	2.6	37.2	60.2	Silty clay
79	6	5	10.0	3.5	37.8	58.7	Silty clay
79	7	1	20.0	4.5	36.2	59.3	Silty clay
79	7	2	10.0	3.0	39.7	57.3	Silty clay
79	7	3	10.0	2.9	39.0	58.1	Silty clay
79	7	4	12.0	2.7	38.6	58.6	Silty clay
79	7	5	10.0	3.5	41.2	55.2	Silty clay
79	8	1	10.0	3.0	37.3	59.8	Silty clay
79	8	3	10.0	3.6	38.9	57.5	Silty clay
79	8	4	10.0	1.5	34.2	64.3	Silty clay
79	8	5	10.0	2.1	41.5	56.5	Silty clay
79	8	6	10.0	1.7	39.0	59.4	Silty clay
79	9	1	10.0	2.4	34.6	63.0	Silty clay
79	9	2	10.0	4.6	37.2	58.2	Silty clay
79	9	3	10.0	1.6	33.6	64.8	Silty clay
79	10	2	10.0	2.4	30.9	66.7	Silty clay
79	10	3	10.0	1.2	31.6	67.2	Silty clay
79	10	4	10.0	1.8	34.7	63.5	Silty clay
79	11	2	10.0	1.8	35.0	63.1	Silty clay
79	11	3	10.0	2.6	36.5	61.0	Silty clay
79	11	4	10.0	5.7	39.2	55.2	Silty clay
79	11	5	10.0	6.9	39.7	53.4	Silty clay
79	11	6	10.0	13.4	30.9	55.7	Silty clay
79	12	1	30.0	4.3	35.5	60.2	Silty clay
79	12	2	10.0	4.3	37.6	58.2	Silty clay
79	12	3	10.0	4.2	35.3	60.5	Silty clay

TABLE 1 – *Continued*

Hole	Core	Section	Interval (cm)	Per Cent Sand	Per Cent Silt	Per Cent Clay	Classification
79	12	4	10.0	1.7	36.4	62.0	Silty clay
79	12	5	10.0	3.5	40.2	56.3	Silty clay
79	12	6	10.0	3.7	38.9	57.4	Silty clay
79	13	2	80.0	2.2	28.4	69.4	Silty clay
79	13	3	10.0	6.1	47.0	46.9	Clayey silt
79	13	4	10.0	2.0	33.0	65.0	Silty clay
79	13	5	10.0	1.9	34.5	63.6	Silty clay
79	13	6	10.0	3.0	33.3	63.7	Silty clay
79	14	1	10.0	3.3	35.2	61.5	Silty clay
79	14	2	10.0	1.4	27.7	70.9	Silty clay
79	14	6	10.0	0.6	36.8	62.6	Silty clay
79	15	2	10.0	6.9	46.4	46.8	Silty clay
79	16	3	10.0	3.6	38.2	58.2	Silty clay
79A	1	1	50.0	11.2	34.8	53.9	Silty clay
79A	1	2	10.0	4.5	43.3	52.3	Silty clay
79A	1	3	10.0	2.4	35.4	62.2	Silty clay
79A	1	4	10.0	5.2	30.5	64.3	Silty clay
79A	1	5	10.0	4.4	34.7	60.9	Silty clay
79A	2	1	10.0	2.4	22.4	75.2	Clay
79A	2	2	10.0	1.6	19.5	78.9	Clay
79A	2	3	10.0	2.7	25.7	71.6	Silty clay
79A	2	4	10.0	1.5	15.7	82.8	Clay
79A	2	5	10.0	2.5	30.8	66.7	Silty clay
79A	2	6	10.0	3.4	20.4	76.2	Clay
79A	3	1	10.0	3.7	27.4	68.9	Silty clay
79A	3	2	10.0	3.9	25.1	71.0	Silty clay
79A	3	3	10.0	3.5	23.8	72.7	Silty clay
79A	3	4	10.0	1.4	31.0	67.6	Silty clay
79A	3	5	10.0	2.5	22.7	74.8	Silty clay
79A	3	6	10.0	4.5	24.7	70.8	Silty clay
79A	4	6	10.0	2.2	31.9	65.9	Silty clay
80	1	1	10.0	12.1	22.2	65.7	Silty clay
80	1	3	10.0	3.9	16.8	79.3	Clay
80	1	4	10.0	2.9	16.3	80.8	Clay
80	1	5	0.0	5.7	12.0	82.4	Clay
80	1	6	10.0	3.6	15.5	80.9	Clay
80	2	1	10.0	2.0	23.4	74.6	Silty clay
80	2	2	10.0	1.6	17.2	81.2	Clay
80	2	3	10.0	2.0	25.2	72.8	Silty clay

TABLE 1 – *Continued*

Hole	Core	Section	Interval (cm)	Per Cent Sand	Per Cent Silt	Per Cent Clay	Classification
80	2	4	5.0	2.0	13.2	84.8	Clay
80	2	5	10.0	3.3	28.0	68.7	Silty clay
80	2	6	10.0	2.7	21.6	75.7	Clay
80	3	1	10.0	3.4	45.8	50.8	Silty clay
80	3	2	10.0	4.5	43.3	52.3	Silty clay
80	3	3	10.0	3.2	47.8	49.0	Silty clay
80	3	4	10.0	4.5	49.0	46.4	Clayey Silt
80	3	5	10.0	3.6	45.9	50.4	Silty clay
80	3	6	10.0	4.1	44.3	51.6	Silty clay
80	4	2	10.0	7.7	50.5	41.8	Clayey silt
80	4	3	10.0	3.3	40.5	56.2	Silty clay
80	4	4	10.0	0.0	51.0	49.0	Clayey silt
80	4	5	10.0	4.9	44.7	50.4	Silty clay
80	5	1	34.0	14.6	37.4	48.0	Silty clay
80	5	2	10.0	3.6	33.7	62.7	Silty clay
80	5	3	10.0	7.8	37.9	54.2	Silty clay
80A	2	1	10.0	8.6	33.5	57.9	Silty clay
80A	2	2	10.0	4.4	34.6	61.1	Silty clay
80A	2	3	10.0	6.1	30.3	63.7	Silty clay
80A	2	4	10.0	2.6	24.6	72.8	Silty clay
80A	3	1	16.0	10.6	24.2	65.2	Silty clay
80A	3	2	10.0	3.8	31.4	64.8	Silty clay
80A	3	3	10.0	1.2	24.2	74.6	Silty clay
80A	3	4	10.0	2.4	37.2	60.3	Silty clay
80A	3	5	10.0	1.8	26.0	72.2	Silty clay
80A	3	6	10.0	3.2	38.7	58.1	Silty clay
80A	4	1	10.0	3.7	39.6	56.7	Silty clay
80A	4	2	10.0	8.6	40.0	51.4	Silty clay
80A	4	3	10.0	1.7	40.7	57.6	Silty clay
80A	4	4	10.0	3.5	46.3	50.2	Silty clay
80A	4	5	10.0	3.5	41.1	55.4	Silty clay
80A	4	6	10.0	1.8	27.1	71.1	Silty clay
80A	5	1	35.0	2.2	46.1	51.7	Silty clay
80A	5	2	10.0	6.0	46.7	47.3	Silty clay
80A	5	3	10.0	1.8	42.9	55.3	Silty clay
80A	5	4	10.0	3.0	42.3	54.8	Silty clay
80A	5	5	10.0	4.8	46.0	49.2	Silty clay
80A	5	6	10.0	1.2	43.2	55.6	Silty clay

TABLE 1 – *Continued*

Hole	Core	Section	Interval (cm)	Per Cent Sand	Per Cent Silt	Per Cent Clay	Classification
81	1	1	10.0	11.7	25.7	62.6	Silty clay
81	1	2	10.0	2.9	18.8	78.3	Clay
81	1	4	10.0	7.0	20.3	72.6	Silty clay
81	1	5	10.0	4.1	30.0	65.9	Silty clay
81	1	6	10.0	11.1	28.5	60.4	Silty clay
81	2	2	10.0	1.9	27.2	70.9	Silty clay
81	2	3	10.0	2.4	27.7	69.9	Silty clay
81	2	4	10.0	1.4	34.0	64.7	Silty clay
81	2	5	10.0	1.4	30.3	68.3	Silty clay
81	3	2	10.0	7.3	28.2	64.5	Silty clay
81	3	3	10.0	8.5	28.0	63.5	Silty clay
81	3	4	10.0	2.7	20.1	77.2	Clay
81	3	5	10.0	1.8	24.2	73.9	Silty clay
81	3	6	10.0	2.4	29.0	68.7	Silty clay
81	4	1	18.0	5.6	29.3	65.1	Silty clay
81	4	5	10.0	3.1	33.5	63.3	Silty clay
81	5	3	10.0	14.6	40.4	45.1	Silty clay
81	6	3	10.0	8.6	48.5	42.9	Clayey silt
82	1	1	10.0	39.4	24.7	35.9	Sand-silt-clay
82	1	2	7.0	20.4	29.9	49.7	Sand-silt-clay
82	1	3	10.0	24.4	28.2	47.5	Sand-silt-clay
82	1	4	8.0	14.4	34.5	51.1	Silty clay
82	1	5	16.0	9.4	30.6	60.0	Silty clay
82	2	1	10.0	6.0	26.6	67.4	Silty clay
82	2	2	22.0	6.8	28.2	65.0	Silty clay
82	2	3	10.0	8.3	24.8	67.0	Silty clay
82	2	4	10.0	6.0	22.9	71.1	Silty clay
82	2	5	10.0	5.2	25.7	69.2	Silty clay
82	2	6	10.0	3.9	23.2	72.9	Silty clay
82	3	1	10.0	2.7	26.0	71.3	Silty clay
82	3	2	10.0	2.1	23.3	74.6	Silty clay
82	3	3	10.0	2.1	20.3	77.5	Clay
82	3	4	10.0	2.0	22.6	75.4	Clay
82	3	5	10.0	2.7	22.9	74.4	Silty clay
82	3	6	10.0	1.9	19.2	78.9	Clay
82	4	1	10.0	1.4	13.7	84.8	Clay
82	4	2	10.0	0.5	18.3	81.2	Clay
82	4	3	10.0	0.7	17.9	81.4	Clay
82	4	4	10.0	1.3	18.2	80.5	Clay

TABLE 1 – *Continued*

Hole	Core	Section	Interval (cm)	Per Cent Sand	Per Cent Silt	Per Cent Clay	Classification
82	4	5	10.0	0.9	19.6	79.6	Clay
82	4	6	10.0	1.3	21.0	77.7	Clay
82	5	2	10.0	1.2	16.3	82.5	Clay
82	6	3	10.0	2.6	21.4	75.9	Clay
82	6	4	10.0	2.1	26.9	70.9	Silty clay
82	6	5	10.0	2.3	25.0	72.7	Silty clay
82	6	6	10.0	1.1	26.7	72.2	Silty clay
82A	1	2	10.0	12.2	28.4	59.4	Silty clay
82A	1	3	10.0	8.0	32.8	59.2	Silty clay
82A	1	4	10.0	9.4	36.6	53.9	Silty clay
82A	1	5	10.0	31.1	28.5	40.4	Sand-silt-clay
82A	1	6	10.0	17.4	34.8	47.7	Silty clay
82A	2	1	10.0	0.5	95.0	4.5	Silt
82A	2	2	10.0	6.7	29.4	64.0	Silty clay
82A	2	3	10.0	7.9	29.4	62.7	Silty clay
82A	2	4	10.0	12.8	30.7	56.5	Silty clay
82A	2	5	10.0	7.8	31.5	60.8	Silty clay
82A	2	6	10.0	9.8	33.2	57.0	Silty clay
82A	3	1	15.0	2.3	21.6	76.2	Clay
82A	3	2	10.0	3.1	23.4	73.4	Silty clay
82A	3	3	10.0	1.8	24.7	73.6	Silty clay
82A	3	4	10.0	1.6	18.6	79.8	Clay
82A	3	5	10.0	3.3	21.0	75.8	Clay
83	1	2	10.0	22.5	32.1	45.4	Sand-silt-clay
83	1	3	10.0	5.3	40.4	54.4	Silty clay
83	1	4	10.0	7.8	41.4	50.8	Silty clay
83	2	1	10.0	4.1	44.2	51.7	Silty clay
83	2	2	10.0	4.0	42.9	53.1	Silty clay
83	2	3	10.0	5.9	28.6	65.5	Silty clay
83	2	4	10.0	5.3	35.1	59.7	Silty clay
83	2	5	10.0	5.8	38.4	55.9	Silty clay
83	2	6	10.0	1.7	36.0	62.3	Silty clay
83	3	1	54.0	5.3	35.5	59.1	Silty clay
83	3	2	10.0	10.3	46.4	43.3	Clayey silt
83	3	3	10.0	10.4	44.2	45.4	Silty clay
83	4	3	10.0	15.8	36.2	48.0	Silty clay
83	5	2	10.0	2.6	21.4	75.9	Clay
83	5	3	10.0	1.8	22.5	75.8	Clay
83	5	4	10.0	3.1	22.0	74.9	Silty clay

TABLE 1 – *Continued*

Hole	Core	Section	Interval (cm)	Per Cent Sand	Per Cent Silt	Per Cent Clay	Classification
83	5	5	10.0	3.0	32.8	64.2	Silty clay
83	5	6	10.0	2.8	20.8	76.5	Clay
83	6	2	10.0	1.9	17.8	80.3	Clay
83	6	3	10.0	3.2	22.3	74.5	Silty clay
83	6	4	10.0	2.3	22.2	75.5	Clay
83	6	5	10.0	2.5	25.3	72.2	Silty clay
83	6	6	10.0	2.3	24.1	73.6	Silty clay
83	7	1	72.0	3.2	26.4	70.4	Silty clay
83	7	2	10.0	3.1	24.8	72.0	Silty clay
83	7	3	10.0	2.0	24.9	73.1	Silty clay
83	7	4	10.0	2.1	23.4	74.5	Silty clay
83	7	5	10.0	2.2	27.0	70.8	Silty clay
83	7	6	10.0	7.7	22.7	69.6	Silty clay
83A	1	2	10.0	4.0	53.3	42.7	Clayey silt
83A	1	4	10.0	11.9	43.7	44.4	Silty clay
83A	2	2	10.0	16.2	43.2	40.5	Clayey silt
83A	2	4	10.0	5.9	43.2	50.9	Silty clay
83A	2	6	10.0	6.4	32.9	60.7	Silty clay
83A	3	2	10.0	7.8	56.8	35.5	Clayey silt
83A	3	1	10.0	6.2	39.1	54.8	Silty clay
83A	3	4	10.0	2.0	31.3	66.7	Silty clay
83A	3	6	10.0	5.1	37.5	57.4	Silty clay
83A	4	4	10.0	3.1	39.5	57.3	Silty clay
83A	4	6	10.0	5.0	40.8	54.3	Silty clay
83A	5	2	25.0	2.5	31.8	65.7	Silty clay
83A	5	4	10.0	7.6	35.7	56.7	Silty clay
83A	5	6	10.0	2.7	32.6	64.8	Silty clay
83A	6	2	20.0	5.9	36.1	58.0	Silty clay
83A	6	4	10.0	5.3	38.0	56.7	Silty clay
83A	6	6	10.0	6.1	37.3	56.7	Silty clay
83A	7	4	10.0	7.5	39.7	52.7	Silty clay
83A	7	6	10.0	11.5	42.4	46.0	Silty clay
83A	8	2	23.0	4.3	48.2	47.5	Clayey silt
83A	8	4	10.0	2.3	30.7	67.0	Silty clay
83A	8	6	10.0	3.2	34.2	62.6	Silty clay
83A	9	2	10.0	3.0	23.3	73.7	Silty clay
83A	9	4	10.0	1.4	24.0	74.7	Silty clay
83A	9	6	10.0	5.7	18.7	75.5	Clay
83A	10	2	10.0	1.4	8.4	90.2	Clay

TABLE 1 – *Continued*

Hole	Core	Section	Interval (cm)	Per Cent Sand	Per Cent Silt	Per Cent Clay	Classification
83A	10	4	10.0	1.4	20.0	78.6	Clay
83A	10	6	10.0	0.5	23.0	76.5	Clay
83A	11	2	10.0	2.8	20.1	77.1	Clay
83A	11	4	10.0	1.1	19.5	79.4	Clay
83A	11	6	10.0	2.2	21.3	76.6	Clay
83A	12	2	10.0	1.0	21.1	77.9	Clay
83A	12	4	10.0	5.2	20.2	74.6	Silty clay
83A	12	6	10.0	1.4	19.4	79.2	Clay
83A	13	2	10.0	2.8	22.6	74.6	Silty clay
83A	13	4	10.0	1.3	23.3	75.4	Clay
83A	13	6	10.0	1.2	21.2	77.6	Clay
83A	14	2	10.0	1.0	18.3	80.6	Clay
83A	14	4	10.0	0.9	16.4	82.7	Clay
83A	14	6	10.0	2.3	17.0	80.7	Clay
83A	15	2	10.0	1.5	18.0	80.5	Clay
83A	15	4	10.0	2.6	18.4	79.0	Clay
83A	15	6	10.0	2.4	15.8	81.7	Clay
83A	16	2	10.0	0.8	16.7	82.5	Clay
83A	16	4	10.0	0.7	23.8	75.4	Clay
83A	16	6	10.0	1.1	19.5	79.4	Clay
84	1	1	10.0	1.0	37.6	61.4	Silty clay
84	1	2	10.0	1.9	27.0	71.1	Silty clay
84	1	4	10.0	1.1	29.6	69.2	Silty clay
84	1	6	10.0	4.4	30.8	64.8	Silty clay
84	2	2	10.0	1.9	29.2	68.9	Silty clay
84	2	4	10.0	4.6	37.9	57.5	Silty clay
84	2	6	10.0	0.6	18.6	80.8	Clay
84	3	2	10.0	2.9	23.1	74.0	Silty clay
84	3	4	10.0	1.0	26.9	72.1	Silty clay
84	3	6	10.0	0.6	17.0	82.4	Clay
84	4	2	10.0	1.6	24.8	73.6	Silty clay
84	4	4	10.0	1.1	24.0	74.8	Silty clay
84	4	6	10.0	0.9	23.8	75.2	Clay
84	5	2	10.0	2.4	31.6	66.0	Silty clay
84	5	4	10.0	12.1	34.9	53.0	Silty clay
84	5	6	10.0	17.3	30.9	51.8	Silty clay
84	6	2	10.0	3.4	41.0	55.6	Silty clay
84	6	4	10.0	7.0	34.2	58.9	Silty clay
84	7	2	10.0	1.8	33.9	64.3	Silty clay

TABLE 1 – *Continued*

Hole	Core	Section	Interval (cm)	Per Cent Sand	Per Cent Silt	Per Cent Clay	Classification
84	7	4	10.0	2.0	34.4	63.6	Silty clay
84	7	6	10.0	1.6	27.5	70.9	Silty clay
84	8	2	10.0	2.6	24.4	73.0	Silty clay
84	8	4	10.0	1.2	32.2	66.5	Silty clay
84	8	5	10.0	4.0	33.0	63.0	Silty clay
84	8	6	10.0	2.0	31.3	66.7	Silty clay
84	9	2	10.0	1.7	28.5	69.9	Silty clay
84	9	4	10.0	1.2	27.2	71.5	Silty clay
84	9	6	10.0	2.1	32.8	65.1	Silty clay
84	10	2	10.0	1.8	32.9	65.3	Silty clay
84	10	4	10.0	1.1	34.6	64.3	Silty clay
84	10	6	10.0	2.1	33.6	64.3	Silty clay
84	11	2	10.0	3.1	32.8	64.1	Silty clay
84	11	4	10.0	3.1	28.4	68.5	Silty clay
84	11	6	10.0	2.5	22.7	74.8	Silty clay
84	12	2	10.0	7.7	30.5	61.8	Silty clay
84	12	4	10.0	1.8	25.8	72.4	Silty clay
84	12	6	10.0	2.5	26.6	70.9	Silty clay
84	13	2	10.0	2.7	25.8	71.5	Silty clay
84	13	4	10.0	2.2	26.1	71.8	Silty clay
84	13	6	10.0	3.0	26.7	70.3	Silty clay
84	14	2	10.0	2.7	27.1	70.3	Silty clay
84	14	4	10.0	2.9	25.3	71.8	Silty clay
84	14	6	10.0	2.9	25.9	71.2	Silty clay
84	16	2	10.0	2.4	28.1	69.5	Silty clay
84	16	4	10.0	2.6	31.2	66.3	Silty clay
84	16	6	10.0	1.9	25.9	72.2	Silty clay
84	17	2	10.0	2.7	29.6	67.7	Silty clay
84	18	2	19.0	3.1	29.9	67.0	Silty clay
84	18	4	10.0	2.9	28.4	68.7	Silty clay
84	19	4	10.0	3.9	29.1	66.9	Silty clay
84	19	6	10.0	2.7	25.3	72.0	Silty clay
84	20	2	10.0	6.9	26.6	66.5	Silty clay
84	21	5	54.0	1.5	23.8	74.7	Silty clay
84	22	2	24.0	16.8	22.0	61.2	Silty clay
84	22	6	10.0	1.2	20.2	78.6	Clay
84	23	4	10.0	1.9	27.4	70.7	Silty clay
84	24	2	10.0	1.7	28.4	69.9	Silty clay
84	24	4	10.0	1.9	27.0	71.1	Silty clay

TABLE 1 – *Continued*

Hole	Core	Section	Interval (cm)	Per Cent Sand	Per Cent Silt	Per Cent Clay	Classification
84	25	2	10.0	1.5	25.4	73.2	Silty clay
84	26	4	10.0	1.4	24.3	74.3	Silty clay
84	26	6	10.0	3.4	27.8	68.8	Silty clay
84	27	2	10.0	2.0	28.8	69.2	Silty clay
84	27	5	10.0	0.2	93.9	6.0	Silty
84	27	6	10.0	1.7	27.0	71.3	Silty clay
84	28	2	10.0	1.2	26.7	72.1	Silty clay
84	28	4	10.0	0.9	24.2	74.9	Silty clay

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