



BORING LOCATIONS
 SCALE: 1" = 200'

8069
 Aug 2002

Soil and Foundation Investigations
Metairie, Louisiana

LOG OF BORING AND TEST RESULTS

Date Boring Drilled: 21 August 2002

Boring No. B-2

Project: **EIGHT (8) STORAGE TANKS - STOLTHAVEN TERMINALS - BRAITHWAITE, LOUISIANA**
FOR: STOLTHAVEN TERMINAL DIVISION - BRAITHWAITE, LOUISIANA

Recorded By: D.A. Hill

Sample No.	SAMPLE Depth in Feet		STRATUM Depth in Feet	VISUAL CLASSIFICATION	Blows per Foot	Symbol Log	Scale (feet)	UNCONFINED COMPRESSION (Qu) (lbs./sq.ft.)	WATER CONTENT (percent)	UNIT WEIGHT (lbs./cu.ft.)		ATTERBERG LIMITS				
	From	To								DRY	WET	L.L.	P.L.	P.I.		
			0													
1	0	0.5	1.0	STIFF BROWN & TAN CLAY W/ SILT												
2	1.5	2.0	4.5	MEDIUM STIFF BROWN & GRAY CLAY W/ SILT				1470	21.9	81.5	99.4					
3	5.5	6.0		MEDIUM STIFF				1900	26.1	91.4	115.2					
4	8.5	9.0	10.0	TAN & GRAY CLAY			10	1080	45.4	69.9	101.7					
5	11.5	12.0		SOFT GRAY CLAY												
6	14.5	15.0	17.5	W/ SILT				745	80.2	51.8	93.4					
7	19.5	20.0		MEDIUM STIFF			20	1035	140.2	33.2	79.7					
			23.0	BROWN ORGANIC CLAY												
8	24.5	25.0		SOFT GRAY CLAY				665	53.6	66.2	101.7					
			28.5	W/ SILT												
9	29.5	30.0		MEDIUM DENSE			30	1070*	28.5	85.9	110.4					
10	32.0	33.5		GRAY SILTY FINE SAND	18				21.0							
11	35.0	36.5	37.0		17				22.3							
12	39.5	40.0					40	1270	43.3	74.3	106.5					
13	44.5	45.0						1085	42.4	74.8	106.5					
14	49.5	50.0					50	1255	35.8	81.4	110.6					
15	54.5	55.0		MEDIUM STIFF GRAY CLAY												
16	59.5	60.0		W/ SILT			60	1165	55.9	64.3	100.3	77	20	57		
17	64.5	65.0														
18	69.5	70.0					70	1020	60.4	59.7	95.7					
19	74.5	75.0														
			76.0													
20	79.5	80.0		SOFT GRAY SANDY CLAY			80	745	29.0	84.0	108.3					
			80.5	W/ SHELL FRAGMENTS												
21	80.5	82.0		DENSE GRAY FINE SAND W/ SHELL	30 = .8'											
22	83.5	85.0		MEDIUM DENSE GRAY FINE SAND W/ SHELL	19											
23	89.5	90.0		LOOSE GRAY CLAYEY FINE SAND			90	715	35.9	77.8	105.7	26	--	NP		
24	94.5	95.0														
25	99.5	100.0		STIFF BROWN ORGANIC CLAY			100	3435	112.5	40.0	85.0					
26	104.5	105.0	103.5													
			106.0	STIFF GRAY CLAY W/ SILT				2520	28.4	90.0	115.6					
27	108.5	109.0		MEDIUM COMPACT GRAY SANDY SILT				1130	27.1	87.6	111.3	24	--	NP		
28	109.0	110.5	109.0		20		110									
				MEDIUM DENSE												
29	113.5	115.0		GRAY SILTY FINE SAND	16											
			116.0													
30	119.5	120.0	120.0	MEDIUM STIFF GRAY SILTY CLAY			120	1275	25.8	89.0	112.0					
				W/ SOME SAND												

CLAY
 SILT
 SAND
 ORGANIC

* 140 lb. hammer dropped 30 inches on 2 inch splitspoon sampler after first being seated 6 inches.
 REMARKS: Water Table Depth = 5.6 ft (See Text)
 * equivalent Qu from 1-point triaxial test

Predominant Type Bold. Modifying Type Light.

CORE ENGINEERING, INC.

Job No. 8069

Soil and Foundation Investigations
Metairie, Louisiana

Boring No. B-3

LOG OF BORING AND TEST RESULTS

Date Boring Drilled: 19 August 2002

Project: **EIGHT (8) STORAGE TANKS - STOLTHAVEN TERMINALS - BRAITHWAITE, LOUISIANA
FOR: STOLTHAVEN TERMINAL DIVISION - BRAITHWAITE, LOUISIANA**

Recorded By: D.A. Hill

Sample No.	SAMPLE Depth in Feet		STRATUM Depth in Feet	VISUAL CLASSIFICATION	*Blows per Foot	Symbol Log	Scale (feet)	UNCONFINED COMPRESSION (Qu) (lbs./sq.ft.)	WATER CONTENT (percent)	UNIT WEIGHT (lbs./cu.ft.)		ATTERBERG LIMITS			
	From	To								DRY	WET	L.L.	P.L.	P.I.	
1	0.0	0.5	1.0	MEDIUM STIFF BROWN & TAN CLAY W/ SAND			0								
2	2.5	3.0		MEDIUM STIFF BROWN SILTY CLAY				1360	23.8	84.2	104.3	34	20	14	
3	5.5	6.0	7.0	MEDIUM STIFF TAN & GRAY CLAY W/ SILT			10	1095	21.4	82.4	100.0				
4	8.5	9.0	10.0	SOFT GRAY SILTY CLAY W/ CLAY LAYERS				1515	51.2	68.9	104.2				
5	11.5	12.0						975	65.5	58.7	97.1	46	25	21	
6	14.5	15.0						735	103.5	43.0	87.6				
7	19.5	20.0	19.0	SOFT BROWN ORGANIC CLAY			20	835	156.6	30.2	77.4				
8	24.5	25.0	25.5	SOFT GRAY CLAY				840	193.7	25.7	75.6				
9	26.5	27.0	29.0					605	61.6	60.5	97.8				
10	29.5	30.0		LOOSE TO MEDIUM DENSE GRAY SILTY FINE SAND W/ SOME CLAY			30	1020*	28.3	85.7	109.9				
11	34.5	35.0						1110*	25.2	88.3	110.6				
12	39.5	40.0	42.0				40	810*	30.3	83.7	109.0				
13	44.5	45.0						625	39.2	74.7	104.0	36	24	12	
14	49.5	50.0					50								
15	54.5	55.0						945	52.2	66.2	100.7				
16	59.5	60.0		SOFT TO MEDIUM STIFF GRAY CLAY W/ SILT LENSES & LAYERS			60	670	61.6	59.6	96.3				
17	64.5	65.0						950	67.2	57.2	95.6				
18	69.5	70.0					70								
19	74.5	75.0						1010	63.7	58.5	95.8				
20	79.5	80.0	80.0				80	880	64.6	57.1	94.0				

CLAY
 SILT
 SAND
 ORGANIC
 Predominant Type Bold. Modifying Type Light.

* 140 lb. hammer dropped 30 inches on 2 inch splitspoon sampler after first being seated 6 inches.

REMARKS: Water Table Depth = 6.8 ft (See Text)

* equivalent Qu from 1-point triaxial test

GORE ENGINEERING, INC.

Job No. 8069

Soil and Foundation Investigations
Metairie, Louisiana

LOG OF BORING AND TEST RESULTS

Date Boring Drilled: 22 August 2002

Boring No. B-4

Project: EIGHT (8) STORAGE TANKS - STOLTHAVEN TERMINALS - BRAITHWAITE, LOUISIANA
FOR: STOLTHAVEN TERMINAL DIVISION - BRAITHWAITE, LOUISIANA

Recorded By: D.A. Hill

Sample No.	SAMPLE Depth in Feet		STRATUM Depth in Feet	VISUAL CLASSIFICATION	*Blows per Foot	Symbol Log	Scale (feet)	UNCONFINED COMPRESSION (Qu) (lbs./sq.ft.)	WATER CONTENT (percent)	UNIT WEIGHT (lbs./cu.ft.)		ATTERBERG LIMITS			
	From	To								DRY	WET	L.L.	P.L.	P.I.	
1	0.0	0.5	0.0	LIMESTONE (FILL)			0								
2	2.5	3.0	4.0	MEDIUM STIFF BROWN & GRAY SILTY CLAY				1750	27.8	84.4	107.8				
3	5.5	6.0		MEDIUM STIFF				1540	23.3	88.6	109.2	55	23	32	
4	8.5	9.0		TAN & GRAY SILTY CLAY			10	1115	42.0	73.7	104.7				
5	11.5	12.0	10.0	SOFT GRAY CLAY				965	74.5	56.1	97.9				
6	14.5	15.0		W/ SILT				720	75.2	54.7	95.9				
7	19.5	20.0	18.0	SOFT TO MEDIUM STIFF			20	920	163.2	29.4	77.4	82	54	28	
8	24.5	25.0		BROWN ORGANIC CLAY				1035	203.6	24.7	74.9				
9	27.0	27.5	26.0	SOFT GRAY CLAY W/ SILT				670	59.6	61.6	98.3				
10	29.5	30.0	29.5	MEDIUM DENSE			30	1210*	26.6	88.2	111.6				
11	34.5	35.0		GRAY SILTY FINE SAND				1050*	25.3	91.5	114.7				
12	39.5	40.0	37.5	VERY SOFT			40	475	36.1	79.9	108.8				
13	44.5	45.0	42.5	GRAY SILTY CLAY				675	43.9	73.6	105.9	53	19	34	
14	49.5	50.0					50								
15	54.5	55.0						1060	40.2	76.7	107.6				
16	59.5	60.0		SOFT TO MEDIUM STIFF GRAY CLAY			60	1070	67.9	56.5	94.8				
17	64.5	65.0		W/ SILT				760	64.0	59.8	98.1	85	29	56	
18	69.5	70.0					70								
19	74.5	75.0						1570	63.4	59.5	97.3				
20	79.0	79.5	77.0	SOFT GRAY SANDY CLAY W/ SHELL			80	725	27.1	80.6	102.4				
			80.0												
							90								
							100								
							110								
							120								

CLAY
 SILT
 SAND
 ORGANIC
 Predominant Type Bold. Modifying Type Light.

* 140 lb. hammer dropped 30 inches on 2 inch splitspoon sampler after first being seated 6 inches.
 REMARKS: Water Table Depth = 4.9 ft (See Text)
 Free Water Depth = 12.0 ft (See Text)
 * equivalent Qu from 1-point triaxial test

GORE ENGINEERING, INC.

Job No. 8069

Soil and Foundation Investigations
Metairie, Louisiana

LOG OF BORING AND TEST RESULTS

Date Boring Drilled: 27 August 2002

Boring No. B-5

Project: **EIGHT (8) STORAGE TANKS - STOLTHAVEN TERMINALS - BRAITHWAITE, LOUISIANA**
FOR: STOLTHAVEN TERMINAL DIVISION - BRAITHWAITE, LOUISIANA

Recorded By: D.A. Hill

Sample No.	SAMPLE Depth in Feet		STRATUM Depth in Feet	VISUAL CLASSIFICATION	Blows per Foot	Symbol Log	Scale (feet)	UNCONFINED COMPRESSION (Qu) (lbs./sq.ft.)	WATER CONTENT (percent)	UNIT WEIGHT (lbs./cu.ft.)		ATTERBERG LIMITS				
	From	To								DRY	WET	L.L.	P.L.	P.I.		
1	0	0.5	1.0	STIFF BROWN & TAN CLAY												
2	2.5	3.0	4.0	MEDIUM STIFF TAN & GRAY CLAY W/ WOOD				1130	46.2	72.0	105.2					
3	5.5	6.0	7.0	SOFT TAN & GRAY SILTY CLAY				620	33.3	84.6	112.8					
4	8.5	9.0	7.0	VERY SOFT TO SOFT GRAY SILTY CLAY			10	380	37.2	79.4	108.9					
5	11.5	12.0					500	39.0	78.3	108.8	41	23	18			
6	14.5	15.0					435	40.6	78.0	109.6						
7	19.5	20.0	19.0	SOFT BROWN ORGANIC CLAY			20	935	399.0	12.7	63.2					
8	24.5	25.0	22.5	VERY SOFT GRAY CLAY W/ SILT				380	37.8	76.4	105.3	39	25	14		
9	29.5	30.0	28.5	SOFT GRAY CLAY W/ TRACE ORGANIC			30	620	82.0	51.1	93.0					
10	34.5	35.0	32.0	LOOSE TO MEDIUM DENSE GRAY SILTY FINE SAND				1310	30.0	86.3	112.2					
11	39.5	40.0	42.0	SOFT TO MEDIUM STIFF GRAY CLAY W/ SILT			40	970*	28.6	87.9	113.1					
12	44.5	45.0					875	53.6	67.4	103.6						
13	49.5	50.0					50	1000	56.4	64.8	101.4					
14	54.5	55.0	910	51.4	68.1	103.1	64	29	35							
15	59.5	60.0	760	52.3	66.9	101.9										
16	64.5	65.0	70	1615	64.7	59.6	98.1									
17	69.5	70.0	900	62.9	59.2	96.4										
18	74.5	75.0														
19	79.5	80.0	80.0													

CLAY
 SILT
 SAND
 ORGANIC
 Predominant Type Bold. Modifying Type Light.

* 140 lb. hammer dropped 30 inches on 2 inch splitspoon sampler after first being seated 6 inches.
 REMARKS: Water Table Depth = 3.7 ft (See Text)
 Free Water Depth = 9.0 ft (See Text)
 * equivalent Qu from 1-point triaxial test

Fig. 6

GORE ENGINEERING, INC.

Job No. 8069

Soil and Foundation Investigations
Metairie, Louisiana

LOG OF BORING AND TEST RESULTS

Date Boring Drilled: 22 August 2002

Boring No. B-6

Project: **EIGHT (8) STORAGE TANKS - STOLTHAVEN TERMINALS - BRAITHTWAITE, LOUISIANA**
FOR: STOLTHAVEN TERMINAL DIVISION - BRAITHTWAITE, LOUISIANA

Recorded By: **D.A. Hill**

Sample No.	SAMPLE Depth in Feet		STRATUM Depth in Feet	VISUAL CLASSIFICATION	Blows per Foot	Symbol Log	Scale (feet)	UNCONFINED COMPRESSION (Qu) (lbs./sq.ft.)	WATER CONTENT (percent)	UNIT WEIGHT (lbs./cu.ft.)		ATTERBERG LIMITS				
	From	To								DRY	WET	L.L.	P.L.	P.I.		
1	.5	1.0	0	LIMESTONE (FILL)			0									
2	2.5	3.0	1.0	VERY STIFF BROWN & TAN CLAY W/ SILT				4655	28.1	91.4	117.1					
3	5.5	6.0	4.0	STIFF TAN & GRAY CLAY W/ SILT				2370	41.3	76.9	108.6					
4	8.5	9.0	7.5	MEDIUM STIFF TAN & GRAY SILTY CLAY				1330	31.7	84.6	111.4					
5	11.5	12.0	10.0	MEDIUM STIFF GRAY CLAY				1165	41.3	77.2	109.1	61	20	41		
6	14.5	15.0	17.0	W/ SILT												
7	19.5	20.0		VERY SOFT BROWN SILTY CLAY			20	455	40.6	74.5	104.7	47	26	21		
8	24.5	25.0	26.5	SOFT GRAY CLAY W/ ORGANIC				905	102.0	43.2	87.3					
9	29.5	30.0	33.0	LOOSE GRAY SILTY FINE SAND				920*	25.1	87.3	109.2					
10	34.5	35.0	42.0													
11	39.5	40.0														
12	44.5	45.0						950	45.6	72.5	105.6					
13	49.5	50.0						960	51.3	66.2	100.2	68	24	44		
14	54.5	55.0														
15	59.5	60.0		SOFT TO MEDIUM STIFF GRAY CLAY W/ SILT				1260	45.6	72.4	105.4	63	22	41		
16	64.5	65.0														
17	69.5	70.0						1040	59.9	62.4	99.8					
18	74.5	75.0						1770	62.2	61.7	100.1					
19	79.5	80.0						1405	57.5	63.5	100.0					
20	81.5	83.0	81.5													
21	83.5	85.0		DENSE GRAY FINE SAND	30 = .7'				20.6							
22	88.5	90.0			29				26.2							
23	94.5	95.0	92.5	STIFF BROWN ORGANIC CLAY W/ WOOD				3905	257.2	18.9	67.6					
24	99.5	100.0	97.0													
25	104.5	105.0		MEDIUM STIFF TO STIFF GRAY CLAY W/ ORGANIC				1900	71.5	56.2	96.4					
26	109.5	110.0						2625	40.6	78.7	110.7					
27	114.5	115.0	111.5	STIFF GREENISH GRAY CLAY W/ SILT												
28	119.5	120.0	120.0					2265	29.8	86.7	112.5					

CLAY
 SILT
 SAND
 ORGANIC
 Predominant Type Bold. Modifying Type Light.

* 140 lb. hammer dropped 30 inches on 2 inch splitspoon sampler after first being seated 6 inches.

REMARKS: Water Table Depth = 3.1 ft (See Text)

* equivalent Qu from 1-point triaxial test

GORE ENGINEERING, INC

Job No. 8069

Soil and Foundation Investigations
Metairie, Louisiana

Boring No. B-7

LOG OF BORING AND TEST RESULTS

Date Boring Drilled: 26 August 2002

Project: EIGHT (8) STORAGE TANKS - STOLTHAVEN TERMINALS - BRAITHWAITE, LOUISIANA
FOR: STOLTHAVEN TERMINAL DIVISION - BRAITHWAITE, LOUISIANA

Recorded By: D.A. Hill

Sample No.	SAMPLE Depth in Feet		STRATUM Depth in Feet	VISUAL CLASSIFICATION	Blows per Foot	Symbol Log	Scale (feet)	UNCONFINED COMPRESSION (q _u) (lbs./sq.ft.)	WATER CONTENT (percent)	UNIT WEIGHT (lbs./cu.ft.)		ATTERBERG LIMITS				
	From	To								DRY	WET	L.L.	P.L.	P.I.		
1	.0	.5	.0	LOOSE TAN FINE SAND (FILL)			0									
2	2.5	3.0	.5	STIFF GRAY & TAN CLAY W/ SILT				3220	34.0	86.4	115.8	61	22	39		
3	5.5	6.0	3.0	MEDIUM STIFF GRAY & TAN CLAY W/ SILT				1510	51.2	67.3	101.8					
4	8.5	9.0	7.0	MEDIUM STIFF TAN & GRAY CLAY				1340	47.0	70.7	104.0					
5	11.5	12.0	10.0	SOFT TO MEDIUM STIFF GRAY CLAY W/ SILT & WOOD				1020	36.3	80.5	109.7	46	26	20		
6	14.5	15.0						740	61.8	60.0	97.1					
7	19.5	20.0	18.5	MEDIUM STIFF BROWN HUMUS				1205	359.7	14.2	65.3					
8	24.5	25.0	24.0	VERY SOFT GRAY CLAY W/ SILT				430	66.8	57.8	96.4	141	51	90		
9	29.5	30.0						470	54.1	65.9	101.5					
10	34.5	35.0	33.0	MEDIUM DENSE GRAY SILTY FINE SAND W/ SOME CLAY				1180	29.5	84.0	108.8					
11	39.5	40.0						1065	22.8	83.1	102.0			(12)		
12	44.5	45.0	46.5													
13	49.5	50.0		MEDIUM STIFF GRAY CLAY W/ SILT				1260	38.0	77.0	106.2					
14	54.5	55.0						1410	46.1	71.0	103.8					
15	59.5	60.0						1450	48.6	69.4	103.2					
16	64.5	65.0						1235	53.0	66.1	101.2	81	27	54		
17	69.5	70.0														
18	74.5	75.0						1490	65.2	62.0	102.5					
19	79.5	80.0	80.0					1045	61.2	59.7	96.3					

NOTE: VALUES IN PARENTHESES () INDICATE PERCENT PASSING NO. 200 SIEVE.

CLAY
 SILT
 SAND
 ORGANIC
 Dominant Type Bold. Modifying Type Light.

* 140 lb. hammer dropped 30 inches on 2 inch splitspoon sampler after first being seated 6 inches.

REMARKS: Water Table Depth = 3.7 ft (See Text)

