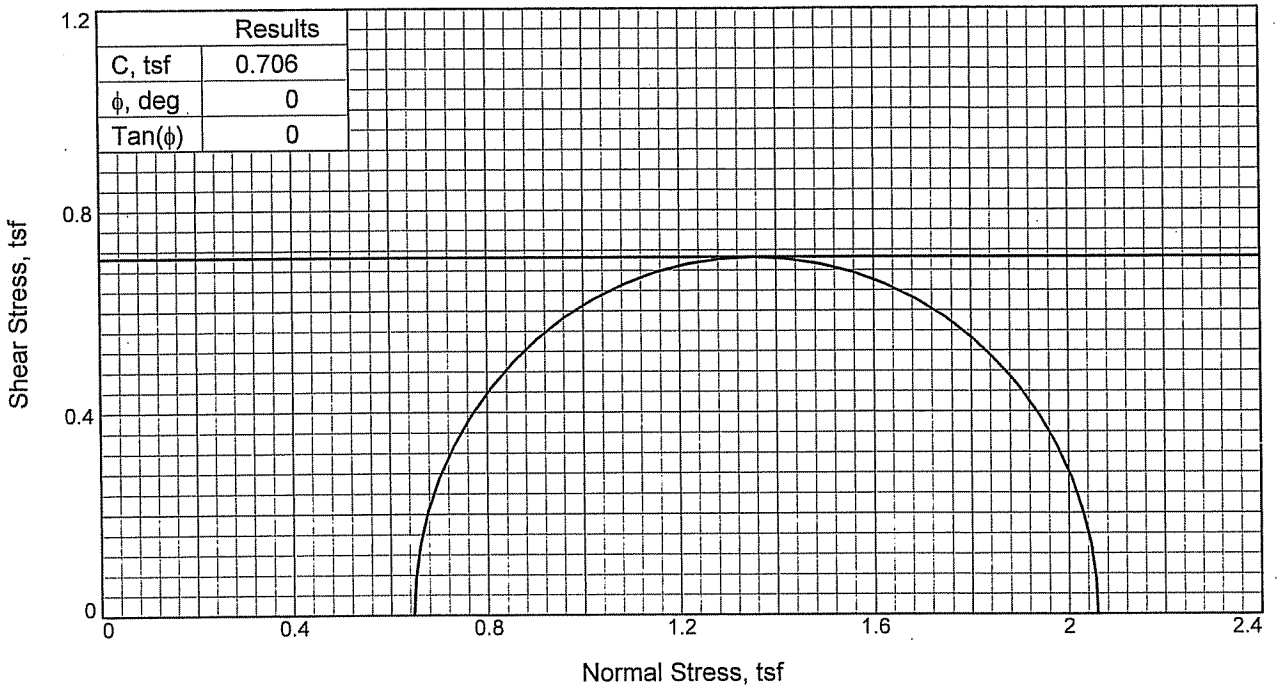
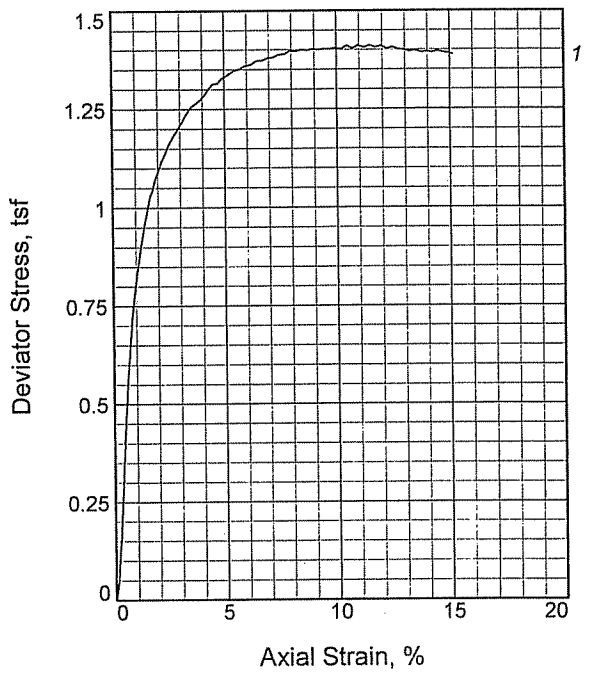
Tolunay-Wong Engineers, Inc.

Project Number:	08.18.921	Client:	United Army Corps of Engineers	Date:	9/18/08
Project Name:	Chocolate Bayou Placement Area DACW64-03-D-0008; Task Order 0079				

Boring No.	Sample No.	Sample Depth (ft)	Soil Description	USCS	Water Content (%)	Dry Density (pcf)	Liquid Limit	Plastic Limit	Plasticity Index	Finer than #200 sieve (%)	Uc/UU Compr. Strength (tsf)	Failure Strain (%)	Confining Pressure (psi)	Failure Type
08-79			**El. 8.75, E=3186743 N=13647040**											
	2	2-4	Gray FAT CLAY; calcareous nodules	CH	20.9	103.9								
	3	4-6	Tan and gray FAT CLAY; calcareous nodules	CH	21.0	105.8								
	4	6-8	Reddish-brown and gray SANDY LEAN CLAY	CL	22.7									
	5	8-10	Reddish-brown and tan LEAN CLAY; calcareous nodules	CL	22.6	101.5	25	15	10	86.1	2.44	11.7	9	Bulge
	6	10-12	Reddish-brown SANDY LEAN CLAY	CL	24.3									
	7	12-14	Reddish-brown SANDY LEAN CLAY	CL	26.5					56.7				
	8	14-16	Reddish-brown SANDY SILT	ML	26.6					58.0				
	9	16-18	Reddish-brown SILTY SAND	SM	29.3									
	10	18-20	Reddish-brown SILTY SAND	SM	30.4					48.6				
08-80			**El. 11.50, E=3185851 N=13647657**											
	2	2-4	Tan and gray SANDY LEAN CLAY	CL	11.5	105.4								
	3	4-6	Tan and gray SANDY LEAN CLAY	CL	16.9	109.6								
	4	6-8	Reddish-brown and gray FAT CLAY	CH	33.3	87.9								
	5	8-10	Reddish-brown SANDY LEAN CLAY	CL	23.6					59.4				
	6	10-12	Reddish-brown and gray LEAN CLAY	CL	24.6					92.9				
	7	12-14	Reddish-brown and gray FAT CLAY	CH	23.5	100.5	55	20	35	98.9	2.50	14.6		60 degree
	8	14-16	Reddish-brown and gray FAT CLAY	CH	23.1	103.2								
	9	16-18	Reddish-brown and gray FAT CLAY	CH	24.3	101.5								
	10	18-20	Reddish-brown and gray FAT CLAY; calcareous nodules	CH	25.3	101.5								
08-81			**El. 9.00, E=3185030 N=13648226**											
	2	2-4	Gray and tan SANDY LEAN CLAY	CL	9.9	113.5								
	3	4-6	Tan and gray SANDY LEAN CLAY	CL	19.0	106.5								
	4	6-8	Tan and gray SANDY LEAN CLAY	CL	18.3	107.3								
	5	8-10	Reddish-brown and gray SILTY SAND	SM	25.2	101.9								
	6	10-12	Tan and gray SILT	ML	25.9					95.8				
	7	12-14	Reddish-brown and gray FAT CLAY with SAND	CH	32.9	90.5	57	20	37	80.0	1.30	7.5	12	45 degree
	8	14-16	Tan and gray SILTY SAND	SM	24.4									
	9	16-18	Reddish-brown and gray FAT CLAY	CH	35.0					97.5				
	10	18-20	Reddish-brown and gray SANDY LEAN CLAY	CL	22.3									
08-82			**El. 12.00, E=3184209 N=13648793**											
	2	2-4	Tan and gray SANDY LEAN CLAY	CL	19.8	106.7								
	3	4-6	Tan and gray SANDY LEAN CLAY; ferrous nodules	CL	16.8	111.3	33	16	17	64.1	2.10	15	6	Vertical shear
	4	6-8	Reddish-brown and gray SILTY SAND	SM	24.9					21.4				
	5	8-10	Reddish-brown and gray SILTY SAND	SM	25.3					23.7				
	7	12-14	Reddish-brown and gray SILTY SAND	SM	26.4					16.8				
	10	18-20	Reddish-brown and gray SILTY SAND	SM	24.0					17.8				
08-83			**El. 11.75, E=3183367 N=13648831**											
	2	2-4	Gray and tan SANDY LEAN CLAY	CL	15.2	109.0								
	3	4-6	Tan and gray SANDY LEAN CLAY	CL	19.6	109.0								
	4	6-8	Tan and reddish-brown SANDY SILTY CLAY	CL-ML	19.7	106.9	22	15	7	69.6	1.90	11	8	Bulge
	5	8-10	Tan and gray SILTY SAND	SM	27.2					25.3				
	7	12-14	Tan and gray SILTY SAND	SM	30.3					24.1				
	10	18-20	Tan and gray SILTY SAND	SM	30.3		NV	NP	NP	19.5				
08-84			**El. 9.75, E=3182831 N=13648199**											
	2	2-4	Tan and gray SANDY LEAN CLAY	CL	20.9	102.3								
	3	4-6	Reddish-brown and gray FAT CLAY	CH	27.3	96.0								
	4	6-8	Reddish-brown and gray FAT CLAY	CH	24.9	100.7								
	5	8-10	Reddish-brown and gray FAT CLAY	CH	25.5	98.8	75	23	52	99.1	1.41	11.5	9	60 degree
	6	10-12	Reddish-brown and gray FAT CLAY	CH	27.4	97.4								
	7	12-14	Reddish-brown and gray FAT CLAY; calcareous nodules	CH	27.1	95.9								

	8	14-16	Reddish-brown and gray SANDY LEAN CLAY	CL	21.6	103.6								
	9	16-18	Reddish-brown and gray FAT CLAY	CH	24.4	102.2								
	10	18-20	Reddish-brown and gray FAT CLAY	CH	24.0	99.1								
08-85			**El. 13.00, E=3182722 N=13648072**											
	2	2-4	Gray SANDY LEAN CLAY	CL	10.0	103.1								
	3	4-6	Gray SANDY LEAN CLAY	CL	11.8	100.2								
	4	6-8	Tan and gray FAT CLAY	CH	26.3	96.0								
	5	8-10	Gray and tan FAT CLAY; calcareous nodules	CH	40.2	85.5								
	6	10-12	Gray and tan FAT CLAY; calcareous nodules	CH	24.5	97.3								
	7	12-14	Gray and tan SANDY LEAN CLAY	CL	22.3	100.6								
	8	14-16	Tan and gray SANDY LEAN CLAY; ferrous nodules	CL	18.7	109.5								
	9	16-18	Tan and gray SANDY LEAN CLAY	CL	17.1	112.7								
	10	18-20	Reddish-brown and gray FAT CLAY; calcareous nodules	CH	26.9	98.3								
	11	20-22	Reddish-brown and gray FAT CLAY; calcareous nodules	CH	27.8	96.4								
	12	22-24	Reddish-brown and gray FAT CLAY; calcareous nodules	CH	25.6	97.1								
	13	24-26	Reddish-brown and gray FAT CLAY	CH	26.1	99.6	59	20	39	99.0				
	14	26-28	Reddish-brown and gray SILTY CLAY	CL-ML	25.1	98.6								
	15	28-30	Reddish-brown and gray FAT CLAY	CH	22.3	103.6								
	16	30-32	Reddish-brown and gray FAT CLAY; calcareous nodules	CH	30.5	90.9								
	17	32-34	Reddish-brown and gray FAT CLAY	CH	31.7	89.7								
	18	34-36	Reddish-brown and gray FAT CLAY; calcareous nodules	CH	29.5	94.7								
	19	36-38	Reddish-brown and gray FAT CLAY; calcareous nodules	CH	30.5	93.2								
	20	38-40	Reddish-brown and gray FAT CLAY; calcareous nodules	CH	22.0	100.7								
08-86			**El. 14.25, E=3181829 N=13646700**											
	2	2-4	Tan and gray FAT CLAY	CH	23.1	100.7								
	3	4-6	Gray and tan FAT CLAY	CH	25.8	96.1								
	4	6-8	Reddish-brown and tan FAT CLAY	CH	32.2	88.1								
	5	8-10	Reddish-brown and gray FAT CLAY	CH	33.2	88.7								
	6	10-12	Gray FAT CLAY	CH	29.2	91.5								
	7	12-14	Gray FAT CLAY	CH	24.7	98.1								
	8	14-16	Tan and gray FAT CLAY; ferrous and calcareous nodules	CH	28.4	90.4								
	9	16-18	Tan and gray FAT CLAY; calcareous nodules	CH	24.3	102.2								
	10	18-20	Reddish-brown and gray FAT CLAY; calcareous nodules	CH	24.4	101.7								
	11	20-22	Reddish-brown and gray FAT CLAY	CH	26.8	96.5								
	12	22-24	Reddish-brown and gray FAT CLAY	CH	25.5	97.3								
	13	24-26	Reddish-brown and gray FAT CLAY	CH	26.3	97.9								
	14	26-28	Reddish-brown and gray FAT CLAY	CH	28.0	94.2								
	15	28-30	Reddish-brown and gray FAT CLAY	CH	33.7	83.2	72	22	50	96.9	0.63	3.1		60 degree
	16	30-32	Reddish-brown and gray FAT CLAY	CH	32.2	86.2								
	17	32-34	Reddish-brown and gray FAT CLAY	CH	32.3	89.1								
	18	34-36	Tan and light gray FAT CLAY	CH	30.2	90.6	77	23	54	99.5	1.04	7.7		60 degree
08-87			**El. 21.50, E=3182848 N=13646032**											
	2	2-4	Tan and gray FAT CLAY; calcareous nodules	CH	18.0	102.0								
	3	4-6	Tan and gray FAT CLAY	CH	23.3	99.3								
	4	6-8	Reddish-brown and gray FAT CLAY; shells	CH	28.1	90.7								
	5	8-10	Gray and reddish-brown FAT CLAY	CH	24.1	94.8								
	6	10-12	Gray and tan FAT CLAY	CH	29.7	90.0								
	7	12-14	Dark gray FAT CLAY	CH	23.3	97.0								
	8	14-16	Dark gray FAT CLAY	CH	28.4	92.8								
	9	16-18	Gray FAT CLAY; ferrous nodules	CH	29.2	92.6								
	10	18-20	Tan and gray FAT CLAY; ferrous nodules	CH	27.7	95.1								
	11	20-22	Tan and gray FAT CLAY; calcareous nodules	CH	27.7	96.0								
	12	22-24	Reddish-brown and gray FAT CLAY	CH	27.9	94.8	72	22	50	98.6	1.68	4.4	20	Slickensided
	13	24-26	Reddish-brown and gray FAT CLAY	CH	27.7	95.9								
	14	26-28	Reddish-brown and gray FAT CLAY	CH	26.5	97.4								
	15	28-30	Reddish-brown and gray FAT CLAY	CH	29.5	92.2								
	16	30-32	Reddish-brown and gray FAT CLAY	CH	26.8	95.3								
	17	32-34	Reddish-brown and gray FAT CLAY; calcareous nodules	CH	28.6	93.3								
	18	34-36	Reddish-brown and gray FAT CLAY; calcareous nodules	CH	29.2	94.1								
	19	36-38	Reddish-brown and gray FAT CLAY; calcareous nodules	CH	29.9	92.6								
	20	38-40	Reddish-brown and gray FAT CLAY; calcareous nodules	CH	29.9	92.6								
08-88			**El. 10.00, E=3182997 N=13645999**											





Sample No.		1
Initial	Water Content, %	25.5
	Dry Density, pcf	98.8
	Saturation, %	97.4
	Void Ratio	0.7061
	Diameter, in.	2.90
	Height, in.	6.00
At Test	Water Content, %	25.4
	Dry Density, pcf	98.8
	Saturation, %	97.2
	Void Ratio	0.7061
	Diameter, in.	2.90
	Height, in.	6.00
Strain rate, %/min.		1.00
Back Pressure, tsf		0.00
Cell Pressure, tsf		0.65
Fail. Stress, tsf		1.41
Ult. Stress, tsf		
σ_1 Failure, tsf		2.06
σ_3 Failure, tsf		0.65

Type of Test:
Unconsolidated Undrained

Sample Type: Undisturbed

Description: Reddish-brown and gray FAT CLAY

LL= 75 **PL=** 23 **PI=** 52

Assumed Specific Gravity= 2.70

Remarks:
Test method: ASTM D 2850
Pocket pen; tsf: 3.25
Failure type: 60 degree

Client: United States Army Corps of Engineers

Project: Chocolate Bayou Placement Area
Contract DACW64-03-D-0008; Task Order 0079

Source of Sample: 08-84 **Depth:** 8-10

Sample Number: 5

Proj. No.: 08.18.921 **Date Sampled:** 8/14/08

TRIAXIAL SHEAR TEST REPORT

Tolunay-Wong Engineers, Inc.

TRIAXIAL COMPRESSION TEST

Unconsolidated Undrained

8/19/2008
1:14 PM

Date: 8/14/08
Client: United States Army Corps of Engineers
Project: Chocolate Bayou Placement Area
Contract DACW64-03-D-0008; Task Order 0079
Project No.: 08.18.921
Location: 08-84
Depth: 8-10 **Sample Number:** 5
Description: Reddish-brown and gray FAT CLAY
Remarks:
Test method: ASTM D 2850
Pocket pen; tsf: 3.25
Failure type: 60 degree
Type of Sample: Undisturbed
Assumed Specific Gravity=2.70 **LL=**75 **PL=**23 **PI=**52
Test Method: ASTM D 2850

Parameters for Specimen No. 1

Specimen Parameter	Initial	Final
Moisture content: Moist soil+tare, gms.	152.760	109.430
Moisture content: Dry soil+tare, gms.	128.180	93.600
Moisture content: Tare, gms.	31.700	31.310
Moisture, %	25.5	25.4
Moist specimen weight, gms.	1289.0	
Diameter, in.	2.90	
Area, in.^{2}	6.61	
Height, in.	6.00	
Wet Density, pcf	124.0	
Dry density, pcf	98.8	
Void ratio	0.7061	
Saturation, %	97.4	

Test Readings for Specimen No. 1

Membrane modulus = .130 kN/cm^2
Membrane thickness = .031 cm
Cell pressure = 9.00 psi (0.648 tsf)
Back pressure = 0.00 psi (0.000 tsf)
Strain rate, %/min. = 1.00
Fail. Stress = 1.412 tsf **at reading no.** 82

Test Readings for Specimen No. 1

No.	Def. Dial in.	Load Dial	Load lbs.	Strain %	Deviator Stress tsf	Minor Princ. Stress tsf	Major Princ. Stress tsf	1:3 Ratio	P tsf	Q tsf
0	0.0244	0.000	0.0	0.0	0.000	0.648	0.648	1.00	0.648	0.000
1	0.0315	4.629	4.6	0.1	0.050	0.648	0.698	1.08	0.673	0.025
2	0.0326	7.177	7.2	0.1	0.078	0.648	0.726	1.12	0.687	0.039
3	0.0347	8.901	8.9	0.2	0.097	0.648	0.745	1.15	0.696	0.048
4	0.0372	12.293	12.3	0.2	0.134	0.648	0.782	1.21	0.715	0.067
5	0.0393	14.394	14.4	0.2	0.157	0.648	0.805	1.24	0.726	0.078
6	0.0406	16.689	16.7	0.3	0.181	0.648	0.829	1.28	0.739	0.091
7	0.0425	19.280	19.3	0.3	0.210	0.648	0.858	1.32	0.753	0.105
8	0.0438	22.488	22.5	0.3	0.244	0.648	0.892	1.38	0.770	0.122
9	0.0457	25.507	25.5	0.4	0.277	0.648	0.925	1.43	0.787	0.139
10	0.0470	28.375	28.4	0.4	0.308	0.648	0.956	1.48	0.802	0.154
11	0.0483	31.349	31.3	0.4	0.340	0.648	0.988	1.53	0.818	0.170
12	0.0503	33.851	33.9	0.4	0.367	0.648	1.015	1.57	0.832	0.184
13	0.0516	36.922	36.9	0.5	0.401	0.648	1.049	1.62	0.848	0.200
14	0.0529	39.693	39.7	0.5	0.431	0.648	1.079	1.66	0.863	0.215
15	0.0550	42.575	42.6	0.5	0.462	0.648	1.110	1.71	0.879	0.231
16	0.0562	44.739	44.7	0.5	0.485	0.648	1.133	1.75	0.891	0.243
17	0.0582	46.735	46.7	0.6	0.507	0.648	1.155	1.78	0.901	0.253
18	0.0594	48.972	49.0	0.6	0.531	0.648	1.179	1.82	0.913	0.265
19	0.0607	51.599	51.6	0.6	0.559	0.648	1.207	1.86	0.928	0.280
20	0.0628	53.531	53.5	0.6	0.580	0.648	1.228	1.89	0.938	0.290
21	0.0640	55.592	55.6	0.7	0.602	0.648	1.250	1.93	0.949	0.301
22	0.0659	57.378	57.4	0.7	0.621	0.648	1.269	1.96	0.959	0.311
23	0.0685	60.309	60.3	0.7	0.653	0.648	1.301	2.01	0.974	0.326
24	0.0705	62.331	62.3	0.8	0.674	0.648	1.322	2.04	0.985	0.337
25	0.0718	63.874	63.9	0.8	0.691	0.648	1.339	2.07	0.993	0.345
26	0.0731	65.954	66.0	0.8	0.713	0.648	1.361	2.10	1.005	0.357
27	0.0764	68.495	68.5	0.9	0.740	0.648	1.388	2.14	1.018	0.370
28	0.0797	71.022	71.0	0.9	0.767	0.648	1.415	2.18	1.032	0.384
29	0.0810	72.653	72.7	0.9	0.784	0.648	1.432	2.21	1.040	0.392
30	0.0843	74.951	75.0	1.0	0.809	0.648	1.457	2.25	1.052	0.404
31	0.0869	77.045	77.0	1.0	0.831	0.648	1.479	2.28	1.064	0.416
32	0.0902	79.014	79.0	1.1	0.852	0.648	1.500	2.31	1.074	0.426
33	0.0935	81.298	81.3	1.2	0.876	0.648	1.524	2.35	1.086	0.438
34	0.0993	84.257	84.3	1.2	0.907	0.648	1.555	2.40	1.101	0.453
35	0.1057	87.797	87.8	1.4	0.944	0.648	1.592	2.46	1.120	0.472
36	0.1115	90.566	90.6	1.5	0.973	0.648	1.621	2.50	1.134	0.486
37	0.1179	93.101	93.1	1.6	0.999	0.648	1.647	2.54	1.148	0.500
38	0.1237	95.892	95.9	1.7	1.028	0.648	1.676	2.59	1.162	0.514
39	0.1301	97.475	97.5	1.8	1.044	0.648	1.692	2.61	1.170	0.522
40	0.1358	99.589	99.6	1.9	1.065	0.648	1.713	2.64	1.181	0.533
41	0.1423	101.435	101.4	2.0	1.084	0.648	1.732	2.67	1.190	0.542
42	0.1545	104.631	104.6	2.2	1.116	0.648	1.764	2.72	1.206	0.558
43	0.1661	107.120	107.1	2.4	1.140	0.648	1.788	2.76	1.218	0.570
44	0.1726	108.652	108.7	2.5	1.155	0.648	1.803	2.78	1.226	0.578
45	0.1848	111.021	111.0	2.7	1.178	0.648	1.826	2.82	1.237	0.589
46	0.1963	112.868	112.9	2.9	1.195	0.648	1.843	2.84	1.246	0.598

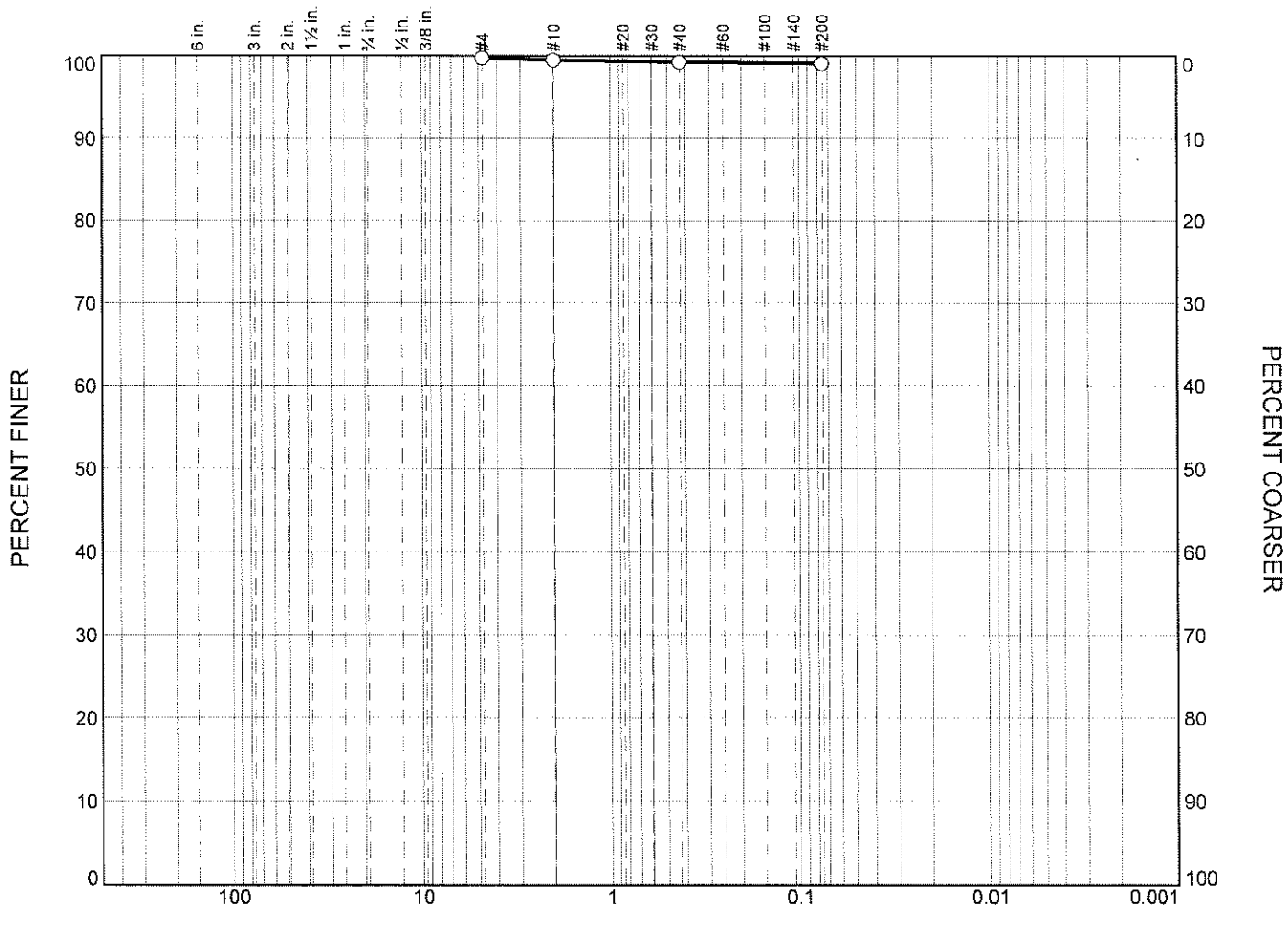
Test Readings for Specimen No. 1

No.	Def. Dial in.	Load Dial	Load lbs.	Strain %	Deviator Stress tsf	Minor Princ. Stress tsf	Major Princ. Stress tsf	1:3 Ratio	P tsf	Q tsf
47	0.2086	114.913	114.9	3.1	1.214	0.648	1.862	2.87	1.255	0.607
48	0.2208	117.041	117.0	3.3	1.234	0.648	1.882	2.90	1.265	0.617
49	0.2332	119.115	119.1	3.5	1.253	0.648	1.901	2.93	1.275	0.627
50	0.2447	120.225	120.2	3.7	1.262	0.648	1.910	2.95	1.279	0.631
51	0.2570	121.243	121.2	3.9	1.270	0.648	1.918	2.96	1.283	0.635
52	0.2693	122.796	122.8	4.1	1.284	0.648	1.932	2.98	1.290	0.642
53	0.2816	124.596	124.6	4.3	1.300	0.648	1.948	3.01	1.298	0.650
54	0.2937	126.148	126.1	4.5	1.313	0.648	1.961	3.03	1.305	0.657
55	0.3059	126.583	126.6	4.7	1.315	0.648	1.963	3.03	1.306	0.658
56	0.3181	128.021	128.0	4.9	1.327	0.648	1.975	3.05	1.312	0.664
57	0.3303	128.961	129.0	5.1	1.334	0.648	1.982	3.06	1.315	0.667
58	0.3508	130.676	130.7	5.4	1.347	0.648	1.995	3.08	1.321	0.673
59	0.3663	131.395	131.4	5.7	1.351	0.648	1.999	3.08	1.323	0.675
60	0.3810	132.585	132.6	5.9	1.359	0.648	2.007	3.10	1.328	0.680
61	0.3958	133.142	133.1	6.2	1.361	0.648	2.009	3.10	1.329	0.681
62	0.4113	134.549	134.5	6.5	1.372	0.648	2.020	3.12	1.334	0.686
63	0.4261	134.922	134.9	6.7	1.372	0.648	2.020	3.12	1.334	0.686
64	0.4414	135.975	136.0	7.0	1.379	0.648	2.027	3.13	1.338	0.690
65	0.4561	136.471	136.5	7.2	1.381	0.648	2.029	3.13	1.338	0.690
66	0.4715	137.555	137.6	7.5	1.388	0.648	2.036	3.14	1.342	0.694
67	0.4863	138.064	138.1	7.7	1.389	0.648	2.037	3.14	1.343	0.695
68	0.5017	139.287	139.3	8.0	1.397	0.648	2.045	3.16	1.347	0.699
69	0.5164	139.559	139.6	8.2	1.396	0.648	2.044	3.16	1.346	0.698
70	0.5319	140.370	140.4	8.5	1.401	0.648	2.049	3.16	1.348	0.700
71	0.5467	140.534	140.5	8.7	1.398	0.648	2.046	3.16	1.347	0.699
72	0.5620	141.315	141.3	9.0	1.402	0.648	2.050	3.16	1.349	0.701
73	0.5768	141.476	141.5	9.2	1.400	0.648	2.048	3.16	1.348	0.700
74	0.5922	142.096	142.1	9.5	1.402	0.648	2.050	3.16	1.349	0.701
75	0.6069	142.425	142.4	9.7	1.402	0.648	2.050	3.16	1.349	0.701
76	0.6223	143.131	143.1	10.0	1.405	0.648	2.053	3.17	1.350	0.702
77	0.6371	143.192	143.2	10.2	1.401	0.648	2.049	3.16	1.349	0.701
78	0.6518	144.541	144.5	10.5	1.411	0.648	2.059	3.18	1.353	0.705
79	0.6674	144.136	144.1	10.7	1.403	0.648	2.051	3.16	1.349	0.701
80	0.6821	145.386	145.4	11.0	1.411	0.648	2.059	3.18	1.353	0.705
81	0.6975	145.202	145.2	11.2	1.405	0.648	2.053	3.17	1.351	0.703
82	0.7123	146.294	146.3	11.5	1.412	0.648	2.060	3.18	1.354	0.706
83	0.7276	146.145	146.1	11.7	1.406	0.648	2.054	3.17	1.351	0.703
84	0.7423	146.956	147.0	12.0	1.410	0.648	2.058	3.18	1.353	0.705
85	0.7578	146.564	146.6	12.2	1.402	0.648	2.050	3.16	1.349	0.701
86	0.7725	147.473	147.5	12.5	1.407	0.648	2.055	3.17	1.351	0.703
87	0.7879	147.245	147.2	12.7	1.401	0.648	2.049	3.16	1.348	0.700
88	0.8027	147.578	147.6	13.0	1.400	0.648	2.048	3.16	1.348	0.700
89	0.8181	147.509	147.5	13.2	1.395	0.648	2.043	3.15	1.346	0.698
90	0.8329	148.320	148.3	13.5	1.399	0.648	2.047	3.16	1.347	0.699
91	0.8477	148.115	148.1	13.7	1.393	0.648	2.041	3.15	1.344	0.696
92	0.8632	148.820	148.8	14.0	1.395	0.648	2.043	3.15	1.346	0.698
93	0.8779	148.969	149.0	14.2	1.393	0.648	2.041	3.15	1.344	0.696

Test Readings for Specimen No. 1

No.	Def. Dial in.	Load Dial	Load lbs.	Strain %	Deviator Stress tsf	Minor Princ. Stress tsf	Major Princ. Stress tsf	1:3 Ratio	P tsf	Q tsf
94	0.8933	149.838	149.8	14.5	1.397	0.648	2.045	3.16	1.346	0.698
95	0.9081	149.869	149.9	14.7	1.393	0.648	2.041	3.15	1.344	0.696
96	0.9229	150.128	150.1	15.0	1.391	0.648	2.039	3.15	1.344	0.696
97	0.9319	150.031	150.0	15.1	1.388	0.648	2.036	3.14	1.342	0.694

Particle Size Analysis - ASTM D 422



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○				0.3	0.2	0.2	99.1	

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	Material Description	USCS
○	08-84	5	8-10	Reddish-brown and gray FAT CLAY	CH

Tolunay-Wong Engineers, Inc.
Houston, Texas

Client: United States Army Corps of Engineers
Project: Chocolate Bayou Placement Area
Contract DACW64-03-D-0008; Task Order 0079
Project No.: 08.18.921