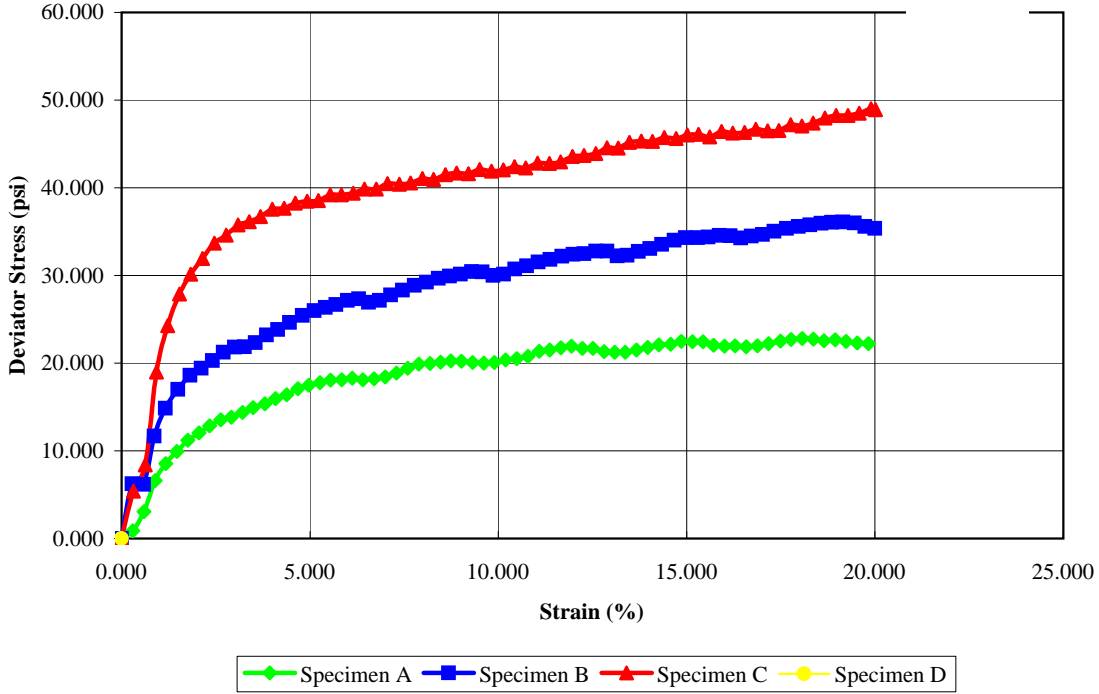


Humboldt Scientific, Inc.  
Unconfined Compression Test Report (ASTM D2166)



Stress-Strain Curve



Before Test	Specimen			
	A	B	C	D
Water Content (%)	19.27	18.82	17.83	
Dry Density (pcf)	94.962	97.286	97.030	
Saturation (%)	66.50	68.68	64.66	
Void Ratio	0.79	0.75	0.75	
Diameter (in)	2.880	2.880	2.880	
Height (in)	6.072	6.005	6.051	
Test Data	A	B	C	D
Unconfined Strength (psi)	22.811	36.105	48.999	
Undrained Shear Strength (psi)	11.405	18.052	24.500	
Rate of Strain (in/min)				
Description				
Project Information		Sample Location		
Project Num	1-26B	Specimen A	140 Exit 24B	
Project	Unconfined Compression Sample Proj	Specimen B		
Date	01/10/2006	Specimen C		
Client	Company Y	Specimen D		
Test Variables				
Specific Gravity	2.72			
Liquid Limit:	15.0			
Plastic Limit:	12.0			
Remarks				

**Specimen A Information**

Unconfined Test

Humboldt Scientific, Inc.

File Location  
UCTest1.HSD**Project Information**

Project No. 1-26B                      Date: 01/10/2006  
 Project Name: Unconfined Compression Sample Project  
 Client: Company Y  
 Sample Location: I40 Exit 24B  
 Sample Description: Clay  
 Remarks:

**Specimen A Sample Data**

Sample Type:  
 Specific Gravity: 2.720    Assumed                      LL: 15                      PL: 12

Sample Parameters	Before Test	After Test
Diameter (in)	2.880	N/A
Height (in)	6.072	N/A
Weight (g)	1176.000	N/A
Moisture (%)	19.27	N/A
Dry Density (pcf)	94.962	N/A
Saturation (%)	66.50	N/A
Void Ratio	0.79	N/A
Height-to-Diameter Ratio	2.11	N/A

**Specimen A Test Data**

Rate of Strain (in/min):  
 Peak Deviator Stress (psi): 22.811                      at reading number: 62

Read Number	Disp (in)	Load (lbs)	Strain (%)	Deviator Stress (psi)
0	0.246	79.3	0.000	0.000
1	0.264	85.0	0.296	0.875
2	0.282	99.2	0.593	3.055
3	0.300	122.3	0.889	6.601
4	0.317	135.0	1.169	8.550
5	0.335	144.0	1.466	9.932
6	0.353	152.3	1.762	11.206
7	0.371	157.8	2.059	12.050
8	0.388	163.1	2.339	12.864
9	0.406	167.4	2.635	13.524
10	0.423	169.5	2.915	13.846
11	0.441	173.0	3.211	14.384
12	0.458	176.6	3.491	14.936
13	0.477	179.5	3.804	15.381
14	0.494	183.2	4.084	15.949
15	0.512	186.1	4.381	16.394
16	0.530	190.5	4.677	17.070
17	0.548	193.2	4.974	17.484
18	0.566	195.2	5.270	17.791
19	0.583	197.0	5.550	18.068
20	0.601	197.2	5.847	18.098

21	0.618	198.3	6.126	18.267
22	0.635	197.2	6.406	18.098
23	0.653	198.0	6.703	18.221
24	0.671	199.3	6.999	18.421
25	0.689	202.3	7.296	18.881
26	0.707	205.9	7.592	19.434
27	0.725	208.9	7.889	19.894
28	0.743	209.3	8.185	19.956
29	0.760	210.3	8.465	20.109
30	0.777	211.2	8.745	20.247
31	0.794	211.0	9.025	20.217
32	0.812	210.0	9.321	20.063
33	0.830	209.5	9.618	19.986
34	0.847	210.0	9.898	20.063
35	0.865	211.9	10.194	20.355
36	0.883	213.0	10.491	20.524
37	0.901	214.5	10.787	20.754
38	0.919	218.4	11.084	21.353
39	0.936	219.3	11.364	21.491
40	0.954	221.0	11.660	21.752
41	0.971	222.2	11.940	21.936
42	0.989	220.6	12.236	21.690
43	1.006	220.5	12.516	21.675
44	1.024	218.2	12.813	21.322
45	1.041	217.6	13.093	21.230
46	1.058	217.7	13.373	21.245
47	1.076	219.3	13.669	21.491
48	1.094	221.3	13.966	21.798
49	1.112	223.2	14.262	22.090
50	1.131	223.5	14.575	22.136
51	1.148	225.8	14.855	22.489
52	1.166	225.6	15.152	22.458
53	1.183	225.6	15.431	22.458
54	1.200	222.8	15.711	22.028
55	1.218	222.2	16.008	21.936
56	1.235	222.4	16.288	21.967
57	1.253	221.7	16.584	21.859
58	1.271	222.4	16.881	21.967
59	1.289	224.1	17.177	22.228
60	1.308	226.1	17.490	22.535
61	1.325	227.1	17.770	22.688
62	1.343	227.9	18.067	22.811
63	1.361	227.4	18.363	22.734
64	1.378	226.3	18.643	22.565
65	1.396	227.0	18.939	22.673
66	1.414	225.7	19.236	22.473
67	1.432	224.6	19.532	22.304
68	1.450	224.2	19.829	22.243

Test Performed By:

Checked By:

**Specimen B Information**

Unconfined Test

Humboldt Scientific, Inc.

File Location  
UCTest1.HSD**Project Information**

Project No. 1-26B                      Date: 01/10/2006  
 Project Name: Unconfined Compression Sample Project  
 Client: Company Y  
 Sample Location:  
 Sample Description: Clay  
 Remarks:

**Specimen B Sample Data**

Sample Type:  
 Specific Gravity: 2.720    Assumed                      LL: 15                      PL: 12

Sample Parameters	Before Test	After Test
Diameter (in)	2.880	N/A
Height (in)	6.005	N/A
Weight (g)	1,187.000	N/A
Moisture (%)	18.82	N/A
Dry Density (pcf)	97.286	N/A
Saturation (%)	68.68	N/A
Void Ratio	0.75	N/A
Height-to-Diameter Ratio	2.09	N/A

**Specimen B Test Data**

Rate of Strain (in/min):  
 Peak Deviator Stress (psi): 36.105                      at reading number: 64

Read Number	Disp (in)	Load (lbs)	Strain (%)	Deviator Stress (psi)
0	0.281	66.7	0.000	0.000
1	0.298	107.4	0.283	6.248
2	0.316	106.9	0.583	6.171
3	0.333	142.8	0.866	11.682
4	0.351	163.5	1.166	14.859
5	0.371	177.5	1.499	17.008
6	0.390	188.0	1.815	18.620
7	0.408	193.2	2.115	19.418
8	0.426	198.8	2.415	20.278
9	0.443	205.0	2.698	21.230
10	0.461	208.8	2.998	21.813
11	0.477	209.0	3.264	21.844
12	0.494	212.2	3.547	22.335
13	0.512	217.8	3.847	23.195
14	0.530	222.0	4.147	23.839
15	0.549	227.3	4.463	24.653
16	0.569	232.3	4.796	25.421
17	0.588	236.0	5.112	25.989
18	0.606	238.3	5.412	26.342
19	0.623	240.4	5.695	26.664
20	0.641	243.5	5.995	27.140

21	0.659	244.7	6.295	27.324
22	0.675	242.1	6.561	26.925
23	0.692	243.6	6.844	27.155
24	0.710	247.7	7.144	27.785
25	0.729	251.2	7.460	28.322
26	0.748	254.8	7.777	28.874
27	0.767	257.1	8.093	29.228
28	0.786	260.0	8.410	29.673
29	0.804	261.7	8.709	29.934
30	0.821	263.0	8.993	30.133
31	0.839	265.0	9.292	30.440
32	0.856	264.7	9.575	30.394
33	0.873	262.1	9.858	29.995
34	0.890	263.1	10.142	30.149
35	0.908	267.0	10.441	30.747
36	0.927	269.2	10.758	31.085
37	0.945	272.0	11.057	31.515
38	0.964	274.0	11.374	31.822
39	0.983	276.3	11.690	32.175
40	1.001	277.8	11.990	32.405
41	1.018	278.4	12.273	32.497
42	1.037	280.3	12.590	32.789
43	1.055	280.1	12.889	32.758
44	1.071	276.7	13.156	32.236
45	1.087	277.1	13.422	32.298
46	1.105	279.9	13.722	32.727
47	1.123	282.1	14.022	33.065
48	1.142	285.2	14.338	33.541
49	1.162	288.2	14.671	34.002
50	1.180	290.3	14.971	34.324
51	1.199	290.2	15.287	34.309
52	1.216	290.7	15.570	34.385
53	1.234	291.9	15.870	34.570
54	1.251	291.7	16.153	34.539
55	1.268	289.9	16.436	34.263
56	1.285	291.3	16.719	34.477
57	1.303	292.5	17.019	34.662
58	1.321	294.9	17.319	35.030
59	1.341	297.0	17.652	35.352
60	1.360	298.5	17.968	35.583
61	1.378	299.8	18.268	35.782
62	1.396	300.9	18.568	35.951
63	1.413	301.7	18.851	36.074
64	1.431	301.9	19.151	36.105
65	1.449	301.2	19.450	35.997
66	1.466	298.6	19.734	35.598
67	1.482	297.2	20.000	35.383

Test Performed By:

Checked By:

## Specimen C Information

Unconfined Test

Humboldt Scientific, Inc.

File Location  
UCTest1.HSD

### Project Information

Project No. 1-26B                      Date: 01/10/2006  
Project Name: Unconfined Compression Sample Project  
Client: Company Y  
Sample Location:  
Sample Description: Clay  
Remarks:

### Specimen C Sample Data

Sample Type:  
Specific Gravity: 2.720    Assumed                      LL: 15                      PL: 12

Sample Parameters	Before Test	After Test
Diameter (in)	2.880	N/A
Height (in)	6.051	N/A
Weight (g)	1183.000	N/A
Moisture (%)	17.83	N/A
Dry Density (pcf)	97.030	N/A
Saturation (%)	64.66	N/A
Void Ratio	0.75	N/A
Height-to-Diameter Ratio	2.10	N/A

### Specimen C Test Data

Rate of Strain (in/min):  
Peak Deviator Stress (psi): 48.999                      at reading number: 65

Read Number	Disp (in)	Load (lbs)	Strain (%)	Deviator Stress (psi)
0	0.274	114.8	0.000	0.000
1	0.293	149.9	0.314	5.388
2	0.312	169.5	0.628	8.397
3	0.330	238.5	0.925	18.989
4	0.348	272.9	1.223	24.269
5	0.367	296.4	1.537	27.877
6	0.385	311.2	1.834	30.149
7	0.404	322.8	2.148	31.929
8	0.423	334.2	2.462	33.679
9	0.442	340.2	2.776	34.600
10	0.461	347.8	3.090	35.767
11	0.479	350.2	3.388	36.135
12	0.497	353.9	3.685	36.703
13	0.516	359.4	3.999	37.548
14	0.535	360.1	4.313	37.655
15	0.553	364.0	4.611	38.254
16	0.572	365.4	4.925	38.469
17	0.590	365.8	5.222	38.530
18	0.609	370.1	5.536	39.190
19	0.627	370.1	5.834	39.190
20	0.646	371.3	6.148	39.374

21	0.664	374.5	6.445	39.865
22	0.683	374.4	6.759	39.850
23	0.701	378.4	7.057	40.464
24	0.720	377.9	7.371	40.387
25	0.738	379.0	7.668	40.556
26	0.757	382.2	7.982	41.047
27	0.775	381.5	8.280	40.940
28	0.794	385.2	8.594	41.508
29	0.812	386.2	8.891	41.662
30	0.831	385.9	9.205	41.615
31	0.849	389.0	9.503	42.091
32	0.868	387.8	9.817	41.907
33	0.887	388.8	10.131	42.061
34	0.905	391.1	10.428	42.414
35	0.923	390.1	10.726	42.260
36	0.942	393.6	11.039	42.797
37	0.961	393.5	11.353	42.782
38	0.979	394.6	11.651	42.951
39	0.998	398.6	11.965	43.565
40	1.017	399.4	12.279	43.688
41	1.036	400.7	12.593	43.887
42	1.054	405.2	12.890	44.578
43	1.072	404.9	13.188	44.532
44	1.090	409.2	13.485	45.192
45	1.109	410.1	13.799	45.330
46	1.127	409.9	14.097	45.300
47	1.146	412.6	14.411	45.714
48	1.165	411.9	14.725	45.607
49	1.183	414.5	15.022	46.006
50	1.201	415.0	15.320	46.082
51	1.219	413.2	15.617	45.806
52	1.238	417.3	15.931	46.436
53	1.256	416.1	16.229	46.251
54	1.275	416.6	16.543	46.328
55	1.293	418.9	16.840	46.681
56	1.312	417.6	17.154	46.482
57	1.330	417.9	17.452	46.528
58	1.349	422.3	17.766	47.203
59	1.367	421.3	18.063	47.050
60	1.385	423.4	18.361	47.372
61	1.404	427.2	18.675	47.955
62	1.422	429.0	18.972	48.232
63	1.441	429.1	19.286	48.247
64	1.459	430.7	19.584	48.493
65	1.478	434.0	19.898	48.999
66	1.485	433.5	20.013	48.922

Test Performed By:

Checked By: