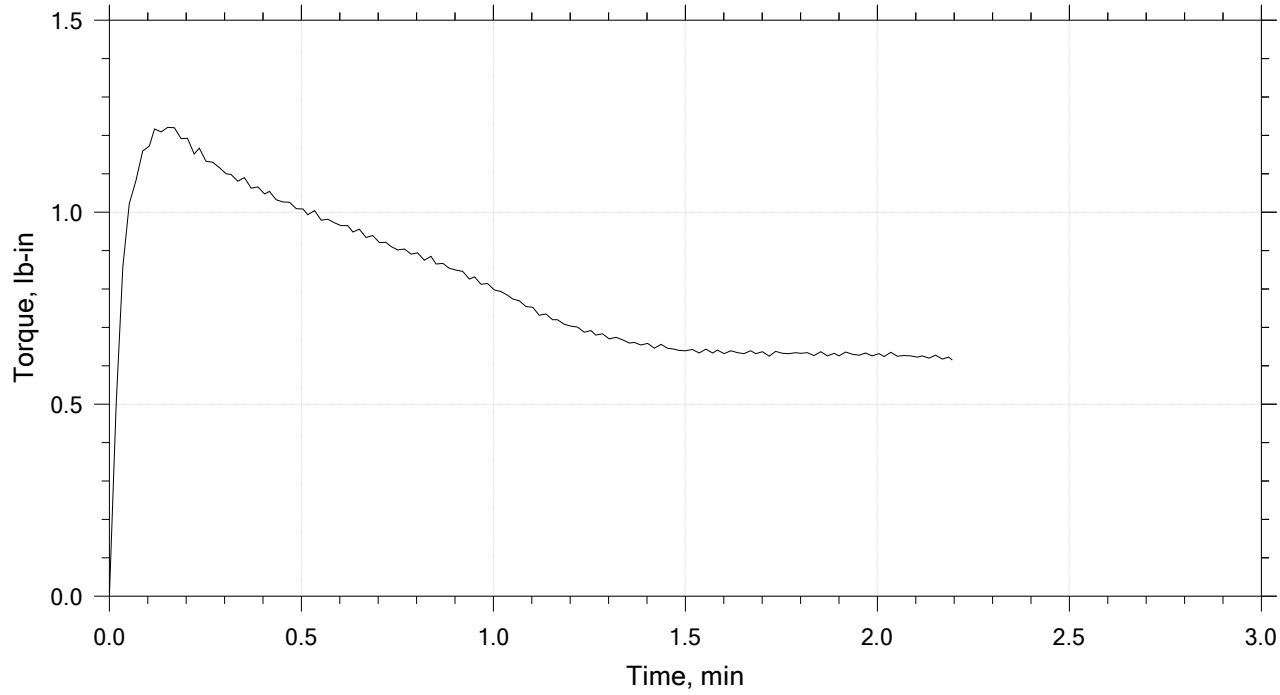
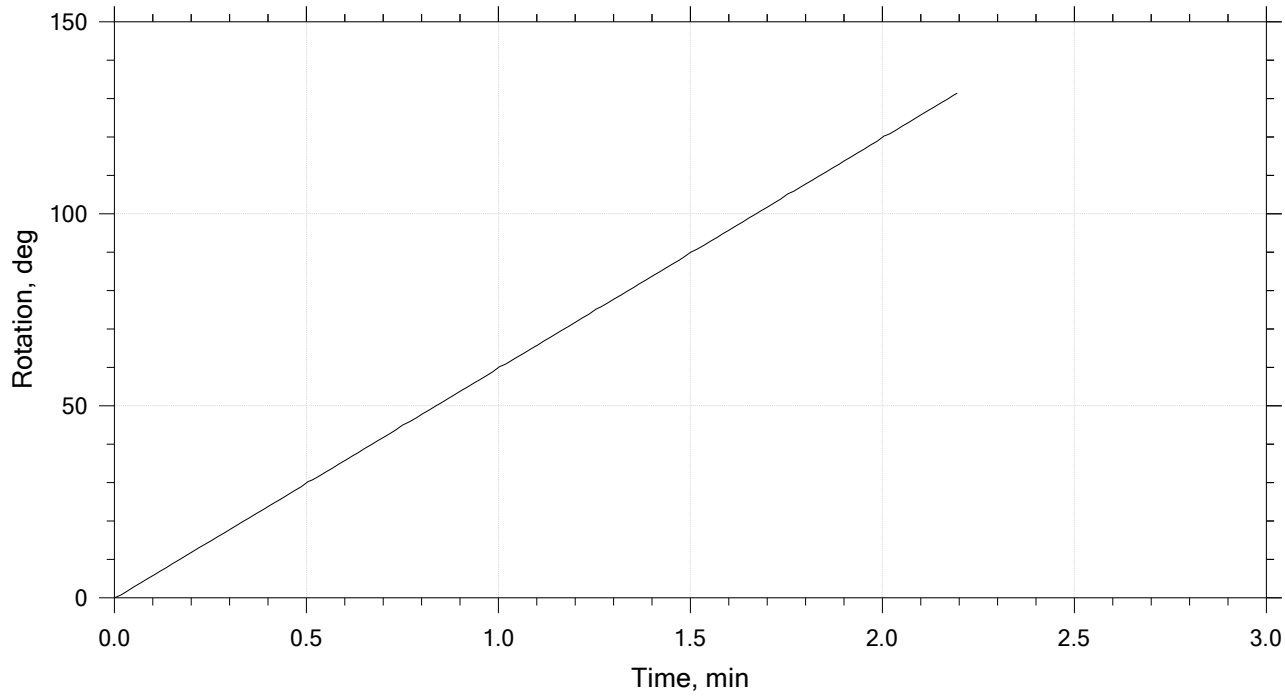
Laboratory Vane Shear Test by ASTM D4648/M

Intact Phase

Step 1 of 1





Project:	Location: Houston, TX	Project No.: 424142
Boring No.:	Tested By: AA	Checked By:
Sample No.:	Test Date: XX/XX/XXXX	Depth:
Test No.:	Sample Type:	Elevation:
Description:		
Remarks:		

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Intact Phase

Step 1 of 1

Elapsed Time min	Rotation deg	Torque lb-in	Lab Shear Strength psi	Field Shear Strength psi
0	0.000	0.000413	0.00158	0.00158
0.017267	0.759	0.496	1.89	1.89
0.034583	1.80	0.857	3.27	3.27
0.051817	2.85	1.02	3.90	3.90
0.0693	3.88	1.08	4.14	4.14
0.086633	4.95	1.16	4.43	4.43
0.10413	5.99	1.17	4.48	4.48
0.11698	6.78	1.22	4.65	4.65
0.13443	7.82	1.21	4.62	4.62
0.15173	8.86	1.22	4.66	4.66
0.16922	9.90	1.22	4.66	4.66
0.18627	10.9	1.19	4.55	4.55
0.2035	12.0	1.19	4.56	4.56
0.22097	13.0	1.15	4.40	4.40
0.23382	13.8	1.17	4.46	4.46
0.25143	14.8	1.13	4.33	4.33
0.26865	15.9	1.13	4.32	4.32
0.2862	16.9	1.12	4.26	4.26
0.3037	18.0	1.10	4.20	4.20
0.31678	18.8	1.10	4.20	4.20
0.334	19.8	1.08	4.13	4.13
0.35147	20.8	1.09	4.16	4.16
0.36878	21.9	1.06	4.06	4.06
0.38633	22.9	1.07	4.07	4.07
0.40383	23.9	1.05	4.00	4.00
0.41693	24.7	1.05	4.03	4.03
0.43417	25.8	1.03	3.95	3.95
0.45163	26.8	1.03	3.92	3.92
0.46895	27.9	1.03	3.92	3.92
0.48625	28.9	1.01	3.86	3.86
0.50388	30.2	1.01	3.85	3.85
0.51673	30.7	0.993	3.79	3.79
0.53407	31.8	1.00	3.84	3.84
0.55155	32.8	0.979	3.74	3.74
0.56885	33.8	0.982	3.75	3.75
0.58612	34.9	0.973	3.71	3.71
0.6035	35.9	0.965	3.69	3.69
0.6208	37.0	0.965	3.69	3.69
0.63387	37.7	0.948	3.62	3.62
0.65107	38.8	0.956	3.65	3.65
0.66852	39.8	0.935	3.57	3.57
0.68583	40.9	0.940	3.59	3.59
0.7033	41.9	0.921	3.52	3.52
0.72033	42.9	0.922	3.52	3.52
0.73335	43.7	0.911	3.48	3.48
0.7508	45.0	0.902	3.44	3.44
0.7679	45.8	0.904	3.45	3.45
0.7854	46.8	0.891	3.40	3.40
0.80272	47.9	0.895	3.42	3.42
0.82003	48.9	0.875	3.34	3.34

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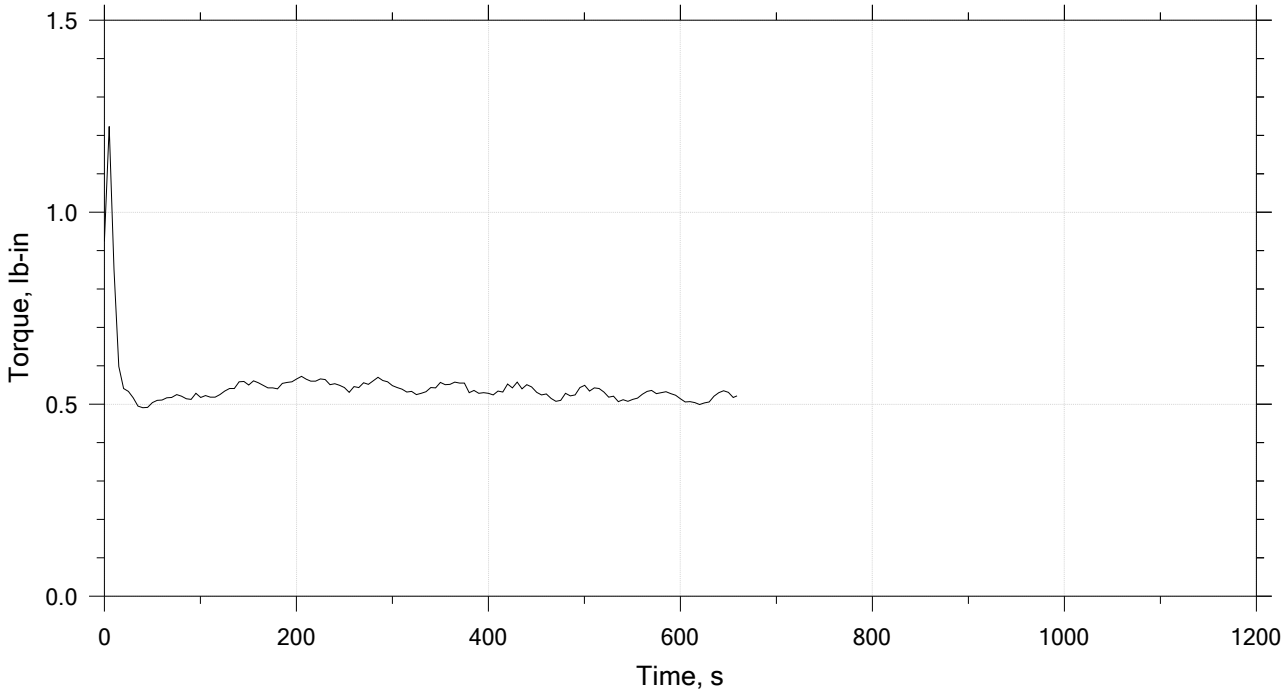
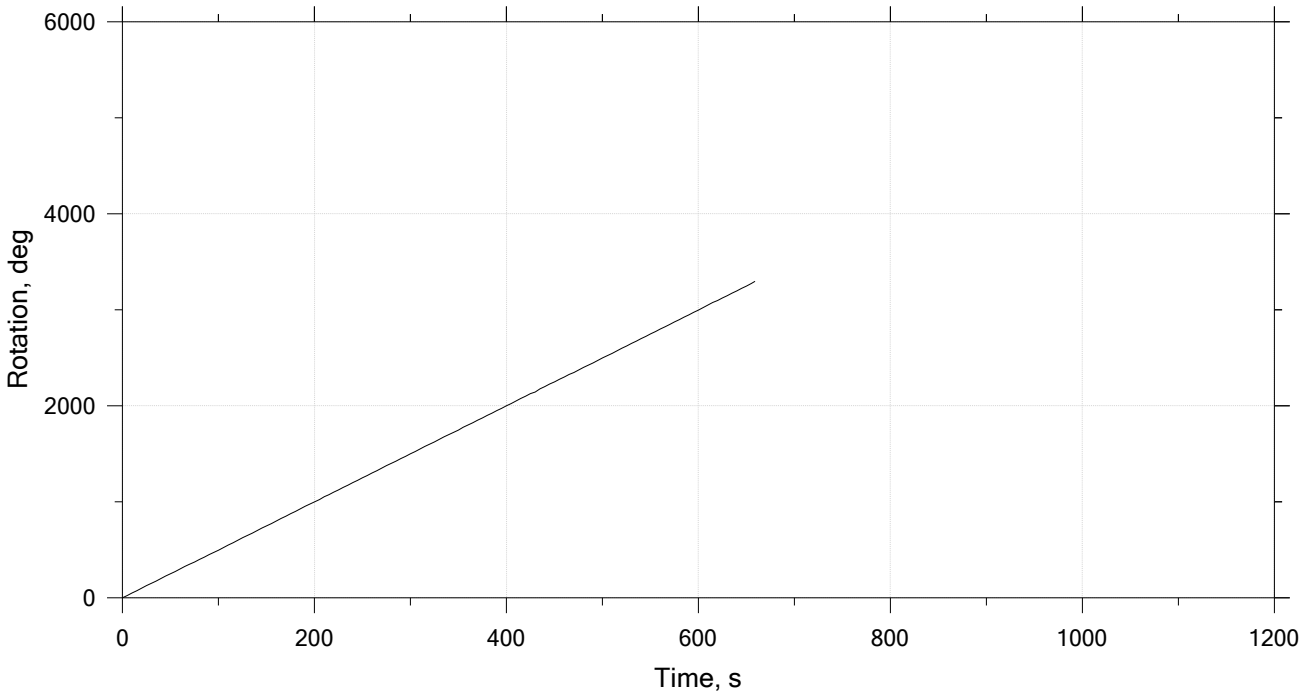
Residual Phase

Step 1 of 1





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Specimen Diameter: 2.83 in	Vane Diameter: 0.50 in	Estimated Specific Gravity: 2.70	Liquid Limit: ---
Specimen Height: 3.54 in	Vane Length: 0.50 in	Initial Void Ratio: 1.87	Plastic Limit: ---
Vane Test Depth: 1.00 in	Vane Correction Factor: 1	Final Void Ratio: 1.87	Plasticity Index: ---

	Before Test Trimmings	Before Test Specimen	After Test Specimen	After Test Trimmings
Container ID	001	RING	002	003
Mass Container, gm	8.14	8.14	8.14	8.14
Mass Container + Wet Soil, gm	224.93	570.57	570.57	224.93
Mass Container + Dry Soil, gm	140.44	351.37	351.37	140.44
Mass Dry Soil, gm	132.3	343.23	343.23	132.3
Water Content, %	63.86	63.86	63.86	63.86
Void Ratio	---	1.87	1.87	---
Degree of Saturation, %	---	92.19	92.19	---
Dry Unit Weight, pcf	---	58.722	58.722	---

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Laboratory Vane Shear Test by ASTM D4648/M

Residual Phase

Step 1 of 1

Elapsed Time s	Rotation deg	Torque lb-in	Lab Shear Strength psi	Field Shear Strength psi
0	0.000	0.925	3.53	3.53
5.006	23.9	1.22	4.68	4.68
10.001	48.4	0.851	3.25	3.25
15.027	73.6	0.598	2.28	2.28
20.021	99.2	0.541	2.07	2.07
25.028	124.	0.533	2.04	2.04
30.047	148.	0.516	1.97	1.97
35.049	173.	0.495	1.89	1.89
40.045	198.	0.491	1.88	1.88
45.066	225.	0.492	1.88	1.88
50.068	249.	0.504	1.93	1.93
55.08	273.	0.510	1.95	1.95
60.1	301.	0.511	1.95	1.95
65.085	324.	0.517	1.97	1.97
70.095	348.	0.518	1.98	1.98
75.118	372.	0.525	2.01	2.01
80.133	399.	0.521	1.99	1.99
85.141	423.	0.514	1.96	1.96
90.152	450.	0.512	1.96	1.96
95.143	472.	0.528	2.02	2.02
100.14	497.	0.517	1.98	1.98
105.16	523.	0.523	2.00	2.00
110.16	549.	0.518	1.98	1.98
115.16	574.	0.518	1.98	1.98
120.15	601.	0.525	2.01	2.01
125.15	626.	0.535	2.04	2.04
130.15	650.	0.541	2.07	2.07
135.18	673.	0.541	2.07	2.07
140.18	699.	0.559	2.13	2.13
145.18	724.	0.559	2.14	2.14
150.19	750.	0.550	2.10	2.10
155.18	773.	0.561	2.14	2.14
160.19	800.	0.556	2.12	2.12
165.2	826.	0.549	2.10	2.10
170.19	848.	0.542	2.07	2.07
175.2	875.	0.543	2.07	2.07
180.21	900.	0.540	2.06	2.06
185.22	926.	0.554	2.12	2.12
190.22	951.	0.557	2.13	2.13
195.24	975.	0.558	2.13	2.13
200.24	999.	0.566	2.16	2.16
205.25	1.02e+03	0.573	2.19	2.19
210.27	1.05e+03	0.566	2.16	2.16
215.02	1.07e+03	0.560	2.14	2.14
220.02	1.10e+03	0.560	2.14	2.14
225.03	1.12e+03	0.566	2.16	2.16
230.03	1.15e+03	0.564	2.15	2.15
235.04	1.17e+03	0.551	2.10	2.10
240.05	1.20e+03	0.554	2.11	2.11
245.04	1.22e+03	0.549	2.10	2.10

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