SOIL BORING LOG AND CPT LOG SHEETS

Project: LDNR Lake Maurepas **Project Location: Lake Maurepas** **Project Number: 10001431.30001**	**Log of Boring B-01A** Sheet 1 of 5

Date(s) Drilled	**8/27/07 - 9/1/07**	Logged By	**K. Gunderson**	Checked By	**M. Shewalla**
Drilling Method	**Rotary Wash 0'-125'**	Drill Bit Size/Type	**6" Wing Bit**	Total Depth Drilled (feet)	**125.0**
Drill Rig Type	**CME 750 Buggy**	Drilling Contractor	**FUGRO**	Sampler Type(s)	**Shelby Tube**
Groundwater Level and Date Measured	**Not Recorded**	Hammer Data	**140 lb Automatic**	Approximate Surface Elevation	**19.79 '**
Location	**N-564823.73, E3500005.11**			Borehole Backfill	**Grout full depth**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
	0						Medium, brown SILT with clay (ML)					
			ST-01	37				24	99	0.83	35	9
15	5						Stiff, gray CLAY with trace of organics (CH)					
			ST-02	49			[CIU @ 11.4 psi]	36	81	1.61	67	43
10	10						Stiff, gray CLAY (CH)	38	80		77	52
			ST-03	38								
5	15						Medium to stiff, gray and brown CLAY with silt pockets (CH) [UU @ 6.6 psi]	33	89	1.02	57	26
			ST-04	40								
0	20											
			ST-05	37			Medium, gray CLAY with silt pockets (CH) [UU @ 9.0 psi]	41	79	0.77		
-5	25											

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
Project Number: 10001431.30001

Log of Boring B-01A

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
			ST-06	45			Medium, gray CLAY with silt pockets (CH) [UU @ 11.0 psi]	38	81	0.79	87	50
-10	30											
			ST-07	40			Medium, gray CLAY with silt pockets and trace of shells (CH) [UU @ 13.0 psi]	50	70	0.66		
-15	35						Medium to stiff, gray, dark gray, black and brown CLAY with organics (OH)					
			ST-08	47			[UU @ 15.4 psi]	114	41	1.09	222	142
-20	40											
			ST-09	49			Gray SILTY SAND with trace of clay (SM) [35.6% passing #200 sieve]	30				
-25	45						Medium to stiff, gray CLAY with shells (CH)					
			ST-10	48			[UU @ 19.0 psi]	53	69	0.99	97	60
-30	50											
			ST-11	37			Stiff, light gray CLAY with trace of silt (CH)	26	97	1.62		
-35	55											

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
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Log of Boring B-01A

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
			ST-12	44			Very stiff, light gray and greenish gray CLAY with silt (CH) [UU @ 23.4 psi]	21	108	3.10	56	33
-40	60											
			ST-13	46			Stiff, tan, light gray and brown CLAY with concretions (CH)	30	91	1.17		
-45	65											
			ST-14	48			Soft, light gray, red and brown CLAY with silt pockets, streaks and layers (CH)	35	88	0.48	61	34
-50	70											
			ST-15	48			Stiff to very stiff, light gray and brown CLAY (CH) [UU @ 26.9 psi]	32	92	2.03	71	44
-55	75											
			ST-16	48								
-60	80											
			ST-17	47			Medium, red, brown, tan and light gray SILTY CLAY with sand layers and lenses (CL)	38	81	0.91		
-65	85						Medium to stiff, gray and brown CLAY (CH)					

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
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Log of Boring B-01A

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
			ST-18	48			Medium to stiff, gray and brown CLAY with silty sand and sandy silt lenses (CH) [UU @ 35.4 psi]	42	75	1.10		
-70	90											
			ST-19	38								
-75	95											
							Stiff, gray CLAY with silty sand layers and trace of shells (CH)	38	84	1.85	65	39
			ST-20	38								
-80	100											
			ST-21	31								
-85	105											
							Stiff, gray CLAY with trace of silt (CH) [UU @ 42.6 psi]	38	81	1.68	80	52
			ST-22	43								
-90	110											
			ST-23	38								
-95	115						Medium, gray CLAY (CH)	34	83	0.81		

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
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Log of Boring B-01A

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
			ST-24	48			Stiff, gray CLAY (CH)	37	80	1.81		
-100	120											
			ST-25	38			Stiff, gray CLAY with silt lenses (CH)	36	83	1.85	72	46
-105	125						Bottom of boring at 125' bgs					
-110	130											
-115	135											
-120	140											
-125	145											

Project: LDNR Lake Maurepas Project Location: Lake Maurepas Project Number: 10001431.30001	**Log of Boring B-02A** Sheet 1 of 6

Date(s) Drilled	9/12/07 - 9/15/07	Logged By	K. Gunderson	Checked By	M. Shewalla
Drilling Method	Rotary Wash 0'-125'	Drill Bit Size/Type	6" Wing Bit	Total Depth Drilled (feet)	150.0
Drill Rig Type	CME 750 Buggy	Drilling Contractor	FUGRO	Sampler Type(s)	Shelby Tube
Groundwater Level and Date Measured	Not Recorded	Hammer Data	140 lb Automatic	Approximate Surface Elevation	26.13 '
Location	N-565124.36, E-3500062.41			Borehole Backfill	Grout full depth

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
	0						Medium, light tan and brown CLAY with silty clay pockets (CH)					
25			ST-01	21								
	5											
20							Medium, light tan and brown CLAY with silty clay pockets (CH)	38	81	0.51	61	31
			ST-02	37								
	10						Medium, gray CLAY with silt streaks and ferrous nodules (CH)					
15							[UU @ 4.2 psi]	45	74	0.56		
			ST-03	43								
	15											
10							Medium, gray CLAY (CH)					
			ST-04	38				39			59	33
	20											
5												
			ST-05	37			Medium, gray CLAY with silt pockets and trace of organics (CH)	35	85	0.59		
	25											

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
Project Number: 10001431.30001

Log of Boring B-02A

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
0												
			ST-06	36			Stiff, gray and light gray CLAY with trace of silt (CH) [UU @ 11.0 psi]	31	89	1.12	58	34
	30											
-5												
			ST-07	39			Medium, light gray and brown CLAY with silt and ferrous nodules (CH)	74	65	0.78		
	35											
-10												
			ST-08	37			Stiff to very stiff, light gray and brown CLAY with silt pockets (CH) [CIU @ 15.4 psi]	37	86	2.05	58	36
	40											
-15												
			ST-09	49			Medium, gray CLAY with silt pockets and trace of organics (CH)	43	74	0.58		
	45											
-20												
			ST-10	37			Medium, gray CLAY with organic pockets (CH) [UU @ 19.0 psi]	50	72	0.82		
	50											
-25												
			ST-11	38			Stiff, gray, dark gray and light gray CLAY with organic pockets (CH)	49	78	1.07	65	42
							Medium, gray SILTY CLAY with trace of shells (CL)					
	55							35	69		47	23
-30												

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
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Log of Boring B-02A

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
							Medium, gray SILTY CLAY (CL)					
			ST-12	46			Medium, gray CLAY with trace of shells (CH)	55	69	0.96	90	57
	60											
-35												
			ST-13	47			Medium, gray CLAY with silt (CH) [UU @ 25.4 psi]	27	97	0.90		
	65											
-40												
			ST-14	45								
							Very stiff, light gray and greenish gray SILTY CLAY with calcareous nodules (CL) [UU @ 27.4 psi]	22	107	3.45	49	30
	70											
-45												
			ST-15	45								
	75											
-50												
			ST-16	48			Medium, tan and light gray SILTY CLAY with clayey silt pockets (CL)	28	100	0.97	35	14
	80											
-55												
			ST-17	47			Medium, brownish tan and light gray SILTY CLAY with trace of organics (CL) [UU @ 33.0 psi]	29	97	0.70	43	22
	85											
-60												

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
Project Number: 10001431.30001

Log of Boring B-02A

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
			ST-18	48			Medium, brownish tan and light gray SILTY CLAY (CL)					
							Very stiff, tan and light gray CLAY with calcerous nodules (CH)	42	78	2.08	90	58
	90											
-65												
			ST-19	47								
							Medium, light gray SILTY CLAY (CL) [UU @ 37.4 psi]	37	80	0.82	45	20
	95											
-70												
			ST-20	47								
	100											
-75												
			ST-21	47								
	105											
-80												
			ST-22	38			Stiff, light gray CLAY (CH) [UU @ 43.0 psi]	35	88	1.53	65	42
	110											
-85												
			ST-23	47								
	115							46	73	1.84	92	66
-90							Stiff, light gray CLAY (CH)					

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
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Log of Boring B-02A

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
			ST-24	48			Stiff, light gray CLAY (CH)					
	120											
-95												
			ST-25	39			Stiff, light gray and gray CLAY with shell layers (CH) [UU @ 49.4 psi]	44	76	1.71		
	125											
-100												
			ST-26	38								
	130											
-105												
			ST-27	48			Stiff, light gray CLAY with silt and ferrous nodules (CH) [UU @ 53.0 psi]	25	97	1.97	51	33
	135											
-110												
			ST-28	38			Light gray SILT with sand and clay (ML) [87.6% passing #200 sieve]	22				
	140											
-115												
			ST-29	48			Very stiff, light gray SILTY CLAY with trace of sand (CL) [UU @ 57.0 psi]	24	100	2.47	32	13
	145											
-120												

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
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Log of Boring B-02A

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
			ST-30	38			Medium, light gray SILTY CLAY with clayey silt (CL)	25	96	0.93	32	13
	150						Bottom of boring at 150' bgs					
-125												
	155											
-130												
	160											
-135												
	165											
-140												
	170											
-145												
	175											
-150												

Project: LDNR Lake Maurepas **Project Location: Lake Maurepas** **Project Number: 10001431.30001**	**Log of Boring B-05** Sheet 1 of 3

Date(s) Drilled	**8/28/07**	Logged By	**J. Pratt**	Checked By	**M. Shewalla**
Drilling Method	**Rotary Mud**	Drill Bit Size/Type	**3 7/8" Wing Bit**	Total Depth Drilled (feet)	**80.0**
Drill Rig Type	**BK 66**	Drilling Contractor	**SESI**	Sampler Type(s)	**Shelby Tube/Split Barrel**
Groundwater Level and Date Measured	**Not Recorded**	Hammer Data	**140 lb Automatic**	Approximate Surface Elevation	**5.60 '**
Location	**N-567296.62, E-3501215.7**			Borehole Backfill	**Grout full depth**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
5	0						Medium to stiff, tan and light gray CLAY with ferrous and calcareous nodules (CH)					
			ST-01	24"								
			ST-02	13"				31	86	1.05	73	47
0	5		ST-03	14"								
			ST-04	25"								
			ST-05	16"								
-5	10											
			ST-06	20"			Medium, gray and greenish gray CLAY with trace of organics (CH)	55	69	0.64	106	68
							Medium, gray CLAY with organic pockets (CH)					
-10	15		ST-07	21"			[CIU @ 3.0 psi]	80	54	0.52	122	86
			ST-08				Soft, gray CLAY with silt pockets and trace of organics (CH)	52	71	0.29		
-15	20						[UU @ 6.8 psi]					
			ST-09	18"								
-20	25											

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
Project Number: 10001431.30001

Log of Boring B-05

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
							Soft, gray CLAY (CH)					
							Soft, light gray CLAY (CH)					
			ST-10	24"			[UU @ 11.6 psi]	54	66	0.30		
-25	30											
							Stiff, light gray and tan CLAY with trace of calcareous nodules (CH)					
			ST-11	24"			[UU @ 13.6 psi]	20	106	2.00	53	37
-30	35											
							Medium to stiff, light gray and tan SILTY CLAY with clay pockets and trace of fine sand (CL)					
			ST-12	24"			[UU @ 15.6 psi]	27	98	1.03	39	23
-35	40											
							Soft, tan and light gray CLAY with silt streaks (CH)					
			ST-13				[UU @ 17.6 psi]	36	85	0.49		
-40	45											
							Medium, tan and light gray CLAY with silt pockets and lenses (CH)					
			ST-14				[UU @ 19.6 psi]	32	85	0.95		
-45	50											
							Medium, tan and light gray SANDY SILT with clay (ML)					
			SS-15	22"	30		[73.0% passing #200 sieve]	27				
-50	55											

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
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Log of Boring B-05

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
							Medium SILT with sand and clay (ML)					
			ST-16				Stiff, tan and light gray SILTY CLAY with silt lenses (CL) [UU @ 23.6 psi]	31	91	1.53	43	23
-55	60		SS-17		19							
			ST-18				Medium, gray CLAY with sandy silt lenses (CH) [UU @ 25.6 psi]	46	78	0.63	57	36
-60	65											
			ST-19				Medium, gray and light gray CLAY with silt streaks and calcareous nodules (CH)	26	93	0.84		
-65	70											
			ST-20				Medium to stiff, light gray CLAY with silt streaks and pockets (CH) [UU @ 29.6 psi]	32	86	1.06	75	56
-70	75											
			ST-21				Medium, light gray CLAY with silt pockets and streaks (CH) [UU @ 31.6 psi]	30	87	0.90	78	59
-75	80						Bottom of boring at 80' bgs					
-80	85											

Project: LDNR Lake Maurepas **Project Location: Lake Maurepas** **Project Number: 10001431.30001**	**Log of Boring B-06** Sheet 1 of 3

Date(s) Drilled	**8/29/07**	Logged By	**J. Pratt**	Checked By	**M. Shewalla**
Drilling Method	**Rotary Mud**	Drill Bit Size/Type	**3 7/8" Wing Bit**	Total Depth Drilled (feet)	**80.0**
Drill Rig Type	**BK 66**	Drilling Contractor	**SESI**	Sampler Type(s)	**Shelby Tube/Split Barrel**
Groundwater Level and Date Measured	**Not Recorded**	Hammer Data	**140 lb Automatic**	Approximate Surface Elevation	**3.20 '**
Location	**N-572375.66, E-3504311.17**			Borehole Backfill	**Grout full depth**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
	0											
			ST-01	22"								
0			ST-02	24"			Soft, gray and brown CLAY (CH)	53	68	0.29	99	61
	5		ST-03	18"								
			ST-04	16"			Soft, gray and greenish gray CLAY with silt pockets (CH)	46	79	0.42	53	32
-5			ST-05	8"								
	10											
			ST-06	24"			Very soft, gray CLAY with organic pockets and organic CLAY (CH) to (OH) [UU @ 4.8 psi]	275	22	0.15	179	127
-10												
	15		ST-07	24"			Soft, gray and dark gray organic CLAY (OH) [UU @ 6.0 psi]	118	35	0.32		
-15			ST-08				Very soft, gray CLAY with organics (CH) [UU @ 7.6 psi]	55	60	0.19		
	20											
-20			ST-09	20"			Soft, gray CLAY with silt pockets (CL) [UU @ 9.6 psi]	37	84	0.33	37	19
	25											

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
Project Number: 10001431.30001

Log of Boring B-06

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
							Soft, gray SILTY CLAY (CL)					
-25							Very stiff, light gray and tan CLAY with trace of silt pockets (CH)					
			ST-10	22"			[UU @ 11.6 psi]	24	102	2.19		
	30											
-30							Stiff, brown, tan and light gray CLAY with concretions (CH)					
			ST-11	23"			[UU @ 13.6 psi]	37	84	1.62	83	59
	35											
-35							Soft, tan, brown and light gray CLAY with concretions (CH)					
			ST-12	22"				37	83	0.47		
	40											
								31	89	0.78		
-40							Medium, light gray and tan CLAY with sandy silt lenses and pockets (CH)					
			ST-13	19"								
							Medium to dense, tan and light gray SANDY SILT with clay (ML)					
	45		SS-14	20"	33		[79.8% passing #200 sieve]	28				
-45			ST-15									
	50		SS-16	21"	22							
-50							Stiff, red, tan and light gray CLAY with silt lenses (CH)					
			SS-17	24"	16			39			79	50
	55											

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
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Log of Boring B-06

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
							Stiff, CLAY (CH)					
-55												
			ST-18	25"			Stiff, light gray and tan CLAY with sandy silt streaks (CH)	27	97	1.51	56	37
	60											
-60							Stiff, light gray CLAY with trace of silt pockets (CH)					
			ST-19	23"			[UU @ 25.6 psi]	31	92	1.49		
	65											
-65							Medium to stiff, gray CLAY with shell fragments (CH)					
			ST-20	22"			[UU @ 27.6 psi]	38	82	1.03	90	64
	70											
-70							Stiff, light gray and greenish gray CLAY with trace of silt pockets (CH)					
			ST-21	24"			[UU @ 29.6 psi]	37	85	1.10		
	75											
-75							Medium, light gray and greenish gray CLAY (CH)					
			ST-22	14"			[UU @ 31.6 psi]	35	86	0.72		
	80						Bottom of boring at 80' bgs					
-80												
	85											

Project: LDNR Lake Maurepas **Project Location: Lake Maurepas** **Project Number: 10001431.30001**	**Log of Boring B-07** Sheet 1 of 3

Date(s) Drilled	**8/29/07**	Logged By	**J. Pratt**	Checked By	**M. Shewalla**
Drilling Method	**Rotary Mud**	Drill Bit Size/Type	**3 7/8" Wing Bit**	Total Depth Drilled (feet)	**80.0**
Drill Rig Type	**BK 66**	Drilling Contractor	**SESI**	Sampler Type(s)	**Shelby Tube/Split Barrel**
Groundwater Level and Date Measured	**Not Recorded**	Hammer Data	**140 lb Automatic**	Approximate Surface Elevation	**3.70 '**
Location	**N-573523.53, E-3504179.84**			Borehole Backfill	**Grout full depth**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
	0											
			ST-01	16"								
							Medium, brown and gray CLAY with ferrous nodules (CH)					
			ST-02	14"			[UU @ 1.2 psi]	47	72	0.64	103	71
0												
	5		ST-03	20"								
							Soft, gray CLAY with organic pockets (CH)					
			ST-04	22"			[UU @ 2.8 psi]	52	67	0.35		
-5			ST-05	23"								
	10											
			ST-06	24"			Soft, gray and brown CLAY with organic pockets (CH to OH) [UU @ 4.8 psi]	175	30	0.32	175	134
-10												
	15		ST-07	7"			Very soft, gray and brown CLAY with organic pockets (CH to OH) [UU @ 6.0 psi]	112	38	0.16	171	103
-15			ST-08	26"			Medium, light gray SILTY CLAY with trace of fine sand and organics (CL) [UU @ 7.6 psi]	29	95	0.69	39	21
	20											
-20			ST-09	23"			Stiff, light gray, greenish gray and tan CLAY with trace of silt (CH) [UU @ 9.6 psi]	25	101	1.95		
	25											

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
Project Number: 10001431.30001

Log of Boring B-07

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
							Stiff, CLAY (CH)					
-25	30		ST-10	24"			Medium, tan, brown and light gray SILTY CLAY with clayey silt with sand layers (CL)	29	94	0.80		
-30	35		ST-11	24"			Stiff, tan and light gray SANDY SILT with clay pockets (ML) [UU @ 13.6 psi]	29	96	1.29		
-35	40		ST-12	22"			Stiff, light gray and brown CLAY with sandy silt pockets (CH)	29	92	1.41	71	49
			SS-13	14"	24		Medium brown, tan and light gray SANDY SILT with clay (ML) [90.6% passing #200 sieve]	27				
-40	45		ST-14									
			SS-15	14"	14							
-45	50		SS-16	12"	31		Medium to dense, tan SILTY SAND or SANDY SILT with trace of clay (ML) [72.7% passing #200 sieve]	27				
-50	55		ST-17	24"			Stiff, greenish gray, light gray and tan CLAY with silt pockets (CH) [UU @ 21.6 psi]	28	93	1.46		

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
Project Number: 10001431.30001

Log of Boring B-07

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
-55	60		ST-18	24"			Stiff, gray CLAY with silt pockets, streaks and shells (CH) [UU @ 23.6 psi]	28	94	1.12		
-60	65		ST-19	0" 5"			Medium, gray and dark gray CLAY with organics (CH)	53			88	55
-65	70		ST-20	22"			Stiff, greenish gray, light gray and tan CLAY (CH) [UU @ 27.6 psi]	27	96	1.75		
-70	75		ST-21	18"			Soft to medium, greenish gray, light gray and tan CLAY with clay and silty sand pockets (CH) [UU @ 29.6 psi]	35	87	0.51		
-75	80		ST-22	22"			Medium to stiff, light gray and bluish gray CLAY with silt pockets (CH)	28	94	1.02	78	56
-80	85						Bottom of boring at 80' bgs					

Project: LDNR Lake Maurepas **Project Location: Lake Maurepas** **Project Number: 10001431.30001**	**Log of Boring B-08** Sheet 1 of 2

Date(s) Drilled	**8/30/07**	Logged By	**J. Pratt**	Checked By	**M. Shewalla**
Drilling Method	**Rotary Mud**	Drill Bit Size/Type	**3 7/8" Wing Bit**	Total Depth Drilled (feet)	**50.5**
Drill Rig Type	**BK 66**	Drilling Contractor	**SESI**	Sampler Type(s)	**Shelby Tube/Split Barrel**
Groundwater Level and Date Measured	**Not Recorded**	Hammer Data	**140 lb Automatic**	Approximate Surface Elevation	**1.80 '**
Location	**N-574980.94, E-3504784.22**			Borehole Backfill	**Grout full depth**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
	0											
			ST-01	15"								
0												
			ST-02	20"			Medium, gray and brown CLAY with trace of organics and ferrous nodules (CH)	44	77	0.78	95	59
	5		ST-03	7"			Medium, gray and brown CLAY with organic pockets (CH)	71			97	56
							Soft, gray CLAY with organic pockets (CH)					
-5			ST-04	25"			[UU @ 2.8 psi]	62	63	0.35	79	43
							Very soft, gray CLAY with organic pockets (CH)					
			ST-05	18"			[UU @ 3.6 psi]	97	52	0.21		
	10											
							Very soft, gray CLAY with organics and organic clay pockets (CH)					
-10			ST-06	24"			[UU @ 4.8 psi]	271	32	0.19		
							Very soft, gray and brown CLAY with trace of organics (CH)					
	15		ST-07	22"			[UU @ 6.0 psi]	168	30	0.13		
-15												
							Stiff, greenish gray and tan CLAY with trace of organics (CH)					
			ST-08	25"				28	99	1.27		
	20											
-20												
							Stiff, light gray, tan and red CLAY with trace of silt (CH)					
			ST-09	17"				22	102	1.66		
	25											

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
Project Number: 10001431.30001

Log of Boring B-08

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
-25							Tan and red CLAY (CH)					
			ST-10				Medium, tan, red and light gray SILTY CLAY with clay (CL)	27	97	0.87	35	12
	30											
-30												
			ST-11	12"								
	35											
-35												
			ST-12	24'	37		Medium, tan CLAYEY SILT with clay pockets and trace of sand (ML) [UU @ 15.6 psi]	25	101	0.79		
	40											
			SS-13									
-40												
			ST-14									
	45		SS-15	14'	15		Medium, tan SANDY SILT with clay (ML) [85.3% passing #200 sieve]	26				
-45												
			ST-16				Dense, tan SANDY SILT with clay (ML) [52.9% passing #200 sieve]	26				
	50		SS-17		36							
							Bottom of boring at 50.5' bgs					
-50												
	55											

Project: LDNR Lake Maurepas **Project Location: Lake Maurepas** **Project Number: 10001431.30001**	**Log of Boring B-09** Sheet 1 of 2

Date(s) Drilled	**8/28/07**	Logged By	**J. Murray**	Checked By	**M. Shewalla**
Drilling Method	**Rotary Mud**	Drill Bit Size/Type	**3 1/2" Wing Bit**	Total Depth Drilled (feet)	**51.0**
Drill Rig Type	**Air Boat**	Drilling Contractor	**ESS**	Sampler Type(s)	**Shelby Tube**
Groundwater Level and Date Measured	**Not Recorded**	Hammer Data	**140 lb Cat Head**	Approximate Surface Elevation	**2.50 '**
Location	**N-576186.24, E-3504662.39**			Borehole Backfill	**Grout full depth**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
	0		ST-01	24"								
0			ST-02	24"			Very soft, gray and dark gray CLAY with silt pockets (CH) [UU @ 1.2 psi]	65	60	0.13	86	51
	5		ST-03	24"			Soft, gray and dark gray CLAY with organic pockets (CH) [UU @ 2.0 psi]	76	54	0.34		
-5			ST-04	24"			Very soft, gray CLAY with organic pockets (CH) [UU @ 2.8 psi]	133	38	0.21	130	91
			ST-05	24"								
	10		ST-06	24"			Very soft, gray and dark gray CLAY with organic clay and organic pockets (CH to OH) [UU @ 4.4 psi]	183	27	0.11	185	118
-10			ST-07	24"			Very soft, gray CLAY with organic clay layers and silt pockets (CH to OH) [UU @ 5.2 psi]	37	75	0.25	61	37
	15		ST-08	24"			Soft, gray and brown CLAY with organic pockets and organic clay layers (CH to OH) [UU @ 6.0 psi]	79	54	0.34		
-15			ST-09	NR								
			ST-10	24"			Medium to stiff, greenish gray and light gray CLAY with trace of silt (CH) [UU @ 7.6 psi]	23	103	1.07		
	20											
-20												
	25		ST-11	20			Stiff, tan and light gray CLAY with calcareous nodules and silty clay pockets (CH)	28	97	1.33	57	37

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
Project Number: 10001431.30001

Log of Boring B-09

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
-25												
	30		ST-12	15			Medium, reddish brown and tan SILTY CLAY (CL) [UU @ 12.0 psi]	31	93	0.88		
-30												
	35		ST-13	24"			Alternating layers of medium, reddish brown and light gray CLAY and tan SANDY SILT to SILTY SAND (CH to SM) [UU @ 14.0 psi]	33	90	0.45		
-35												
	40		ST-14	11"								
-40												
	45		ST-15	16"			Tan SANDY SILT with clay lenses (ML) [88.8% passing #200 sieve]	31				
-45												
	50		ST-16	NR								
-50							Bottom of boring at 51' bgs					
	55											

Project: LDNR Lake Maurepas **Project Location: Lake Maurepas** **Project Number: 10001431.30001**	**Log of Boring B-10** Sheet 1 of 2

Date(s) Drilled	**8/28/07**	Logged By	**J. Murray**	Checked By	**M. Shewalla**
Drilling Method	**Rotary Mud**	Drill Bit Size/Type	**3 1/2" Wing Bit**	Total Depth Drilled (feet)	**50.5**
Drill Rig Type	**Air Boat**	Drilling Contractor	**ESS**	Sampler Type(s)	**Shelby Tube**
Groundwater Level and Date Measured	**Not Recorded**	Hammer Data	**140 lb Cat Head**	Approximate Surface Elevation	**-1.30 '**
Location	**N-577699.95, E-3504180.38**			Borehole Backfill	**Grout full depth**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
	0											
			ST-01	8"								
			ST-02	20"			Soft, gray CLAY with organic pockets (CH) [UU @ 1.2 psi]	61	64	0.46	97	70
-5												
							Medium, gray CLAY with organic pockets (CH)					
	5		ST-03	24"			[UU @ 2.0 psi]	64	61	0.66		
							Very soft, gray and dark gray CLAY with organic pockets (CH)					
			ST-04	20"			[UU @ 2.8 psi]	80	51	0.19		
							Very soft, gray CLAY with organic pockets (CH)					
-10			ST-05	24"			[UU @ 3.6 psi]	85	48	0.14	124	90
	10						Very soft, gray CLAY with organic pockets (CH)					
			ST-06	24"				83			109	73
							Very soft, gray and brown CLAY with organic pockets and organic clay layers (CH to OH)					
			ST-07	24"				114	42	0.13		
-15												
							Very soft, brown and gray organic CLAY with wood (OH)					
	15		ST-08	24"			[UU @ 6.0 psi]	223	23	0.18	295	203
			ST-09	24"								
							Soft, gray CLAY with silt pockets and trace of organics (CH)					
-20							[UU @ 2.6 psi]	34	89	0.39		
			ST-10	20"			Medium, light gray SILTY CLAY (CL) [UU @ 7.6 psi]	26	97	0.63		
	20											
-25												
							Very stiff, greenish gray and light gray CLAY with silt pockets and calcareous nodules (CH)					
	25		ST-11	24"				22	107	2.35		

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
Project Number: 10001431.30001

Log of Boring B-10

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
-30												
	30		ST-12	24"			Medium to stiff, light gray, greenish gray and brown SILTY CLAY with clay pockets (CL) [UU @ 12.0 psi]	28	94	1.08		
-35												
	35		ST-13	24"			Laminated layers of medium, red, brown and light gray SILTY CLAY, CLAYEY SILT and SANDY SILT (CL) [UU @ 14.0 psi]	30	91	0.90		
-40												
	40		ST-14	24"			Medium, reddish brown and light gray CLAY (CH)	41	79	0.84		
-45												
	45		ST-15	24"			Soft, tan SILT with trace of clay and fine sand (ML) [96.8% passing #200 sieve]	31				
-50							Soft, tan SILT with trace of sand and clay lenses (ML)					
	50		ST-16	24"			[UU @ 19.6 psi]	35	92	0.47		
							Bottom of boring at 50.5' bgs					
-55												
	55											

Project: LDNR Lake Maurepas **Project Location: Lake Maurepas** **Project Number: 10001431.30001**	**Log of Boring B-11** Sheet 1 of 2

Date(s) Drilled	**8/29/07 - 8/31/07**	Logged By	**J. Murray**	Checked By	**M. Shewalla**
Drilling Method	**Rotary Mud**	Drill Bit Size/Type	**3 1/2" Wing Bit**	Total Depth Drilled (feet)	**53.0**
Drill Rig Type	**Air Boat**	Drilling Contractor	**ESS**	Sampler Type(s)	**Shelby Tube/Split Spoon**
Groundwater Level and Date Measured	**Not Recorded**	Hammer Data	**140 lb Cat Head**	Approximate Surface Elevation	**-2.70 '**
Location	**N-579059.47, E-3503823.50**			Borehole Backfill	**Grout full depth**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
	0		ST-01	8"								
-5			ST-02	20"			Soft, gray CLAY with organic pockets (CH) [UU @ 1.2 psi]	70	55	0.37	129	97
	5		ST-03	21"			Stiff, gray CLAY with organic pockets and 3/4" vertical root [UU @ 2.0 psi]	78	52	1.20		
-10			ST-04	15"			Very soft, gray CLAY with organic pockets (CH) [UU @ 2.8 psi]	93	45	0.22		
			ST-05	24"			Soft, gray SILTY CLAY with organic pockets (CL) [UU @ 3.6 psi]	34	88	0.35	40	22
	10		ST-06	24"			Very soft, gray CLAY with trace of silt and organic pockets (CH)	46	76	0.07		
-15			ST-07	24"			Soft, greenish gray and light gray CLAY with trace of organics (CH)	39			58	39
	15		ST-08	24"			Soft, greenish gray and light gray CLAY with trace of organics and silt pockets (CH) [UU @ 6.0 psi]	30	88	0.49	57	41
-20			ST-09	10"			Soft, greenish gray and light gray CLAY with silt pockets (CH)	32	93	0.49		
			ST-10	24"								
-25	20											
	25		ST-11	15"			Medium, tan SANDY SILT with clay pockets (ML)	29	92	0.51	34	8

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
Project Number: 10001431.30001

Log of Boring B-11

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
-30												
	30		ST-12	8"			Medium, tan SANDY SILT with clay (ML) [70.8% passing #200 sieve]	28				
-35												
	35		SS-13	20"			Medium, tan SANDY SILT with clay (ML) [78.9% passing #200 sieve]	29				
-40												
	40		ST-14	5"								
-45												
	45		SS-15	15"	>50		Very dense, tan fine SAND with silt (SM) [15% passing #200 sieve]	26				
-50												
	50		ST-16	NR"								
-55			SS-17	22"	19		Very stiff, gray CLAY with shell fragments (CH)	44			70	48
							Bottom of boring at 53' bgs					
	55											

Project: LDNR Lake Maurepas **Project Location: Lake Maurepas** **Project Number: 10001431.30001**	**Log of Boring B-12** Sheet 1 of 2

Date(s) Drilled	**8/29/07 - 9/1/07**	Logged By	**J. Murray**	Checked By	**M. Shewalla**
Drilling Method	**Rotary Mud**	Drill Bit Size/Type	**3 1/2" Wing Bit**	Total Depth Drilled (feet)	**51.0**
Drill Rig Type	**Air Boat**	Drilling Contractor	**ESS**	Sampler Type(s)	**Shelby Tube/Split Spoon**
Groundwater Level and Date Measured	**Not Recorded**	Hammer Data	**140 lb Cat Head**	Approximate Surface Elevation	**-3.00 '**
Location	**N-580499.98, E-3503474.00**			Borehole Backfill	**Grout full depth**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
	0		ST-01	22"								
-5			ST-02	24"			Medium, light gray and greenish gray CLAY with ferrous nodules (CH) [UU @ 1.2 psi]	59	64	0.43	107	71
	5		ST-03	24"			Medium, gray and dark gray CLAY with organic pockets (CH) [UU @ 3.0 psi]	90	49	0.56		
-10			ST-04	24"			Very soft, gray and dark gray CLAY with organic pockets (CH) [UU @ 2.8 psi]	109	43	0.21		
			ST-05	24"			Soft, brown, black and gray organic CLAY with organic pockets (OH) [UU @ 3.6 psi]	146	34	0.27	259	184
	10		ST-06	5"								
-15			ST-07	24"			Soft, light gray and gray SILTY CLAY with organic pockets (CL) [UU @ 3.0 psi]	28	93	0.40		
	15		ST-08	24"			Medium, greenish gray and light gray SILTY CLAY with organic pockets (CL) [UU @ 6.0 psi]	27	99	0.66	38	21
-20			ST-09	5"								
			ST-10	24"			Soft to medium, gray, greenish gray and light gray SILTY CLAY with silt pockets (CL) [UU @ 7.6 psi]	27	99	0.49		
	20											
-25												
	25		ST-11	15"			Medium to stiff, light gray and greenish gray SILTY CLAY (CL) [UU @ 10.0 psi]	26	101	1.06	37	17

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
Project Number: 10001431.30001

Log of Boring B-12

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
-30							Medium to stiff, light gray and greenish gray SILTY CLAY (CL)					
	30		ST-12	20"			Loose, tan and light gray SANDY SILT with clay (ML)	28			32	7
-35												
	35		SS-13	10"	48		Dense, tan SILTY SAND with trace of clay (SM) [32.0% passing #200 sieve]	24				
-40												
	40		SS-14		>50		Very dense, tan, fine SILTY SAND with trace of clay (SM) [26.6% passing #200 sieve]	20				
-45												
	45		SS-15	18"	>50							
-50												
	50		SS-16	20"	>50							
							Bottom of boring at 51' bgs					
-55												
	55											

Project: LDNR Lake Maurepas **Project Location: Lake Maurepas** **Project Number: 10001431.30001**	**Log of Boring B-13** Sheet 1 of 2

Date(s) Drilled	**8/29/07 - 8/29/07**	Logged By	**J. Murray**	Checked By	**M. Shewalla**
Drilling Method	**Rotary Mud**	Drill Bit Size/Type	**3 1/2" Wing Bit**	Total Depth Drilled (feet)	**51.0**
Drill Rig Type	**Air Boat**	Drilling Contractor	**ESS**	Sampler Type(s)	**Shelby Tube/Split Spoon**
Groundwater Level and Date Measured	**Not Recorded**	Hammer Data	**140 lb Cat Head**	Approximate Surface Elevation	**0.80 '**
Location	**N-581703.87, E-3503150.12**			Borehole Backfill	**Grout full depth**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
0	0											
			ST-01	24"								
			ST-02	24"			Soft, greenish gray and light gray CLAY with organic pockets [UU @ 1.2 psi]	109	47	0.42	103	72
	5		ST-03	14"			Soft, gray CLAY with organic pockets (CH) [UU @ 2.0 psi]	99	44	0.28		
-5			ST-04	24"			Very soft to soft, gray CLAY with organic pockets and wood (CH)	107				
			ST-05	24"			Very soft, gray and dark gray CLAY with organic pockets (CH)	72			125	92
	10											
-10			ST-06	24"								
			ST-07	24"			Medium, greenish gray and light gray CLAY with silt pockets and ferrous nodules (CH) [UU @ 5.2 psi]	33	91	0.55		
	15		ST-08	24"								
-15			ST-09	24"			Medium, light gray, greenish gray and tan CLAY with silt pockets and ferrous nodules (CH)	27	101	0.93		
			ST-10	24"			Stiff to very stiff, light gray, greenish gray and tan SILTY CLAY with ferrous nodules (CL) [UU @ 10.0 psi]	23	104	2.00		
	20											
-20												
	25		ST-11	24"			Tan SANDY SILT with trace of clay (ML) [98.7% passing #200 sieve]	34				
-25												

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
Project Number: 10001431.30001

Log of Boring B-13

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
							Tan SANDY SILT with trace of clay (ML)					
	30		SS-12	16"	38		Dense to very dense, tan SILTY SAND (SM) [27.4% passing #200 sieve]	25				
-30												
	35		SS-13	6"	51							
-35												
	40		SS-14	18"	50 for 5"		Medium to dense, tan fine SAND with silt and clay (SM) [49.3% passing #200 sieve]	19				
-40												
	45		SS-15	18"	16							
-45												
	50		ST-16	8"								
-50							Bottom of boring at 51' bgs					
	55											
-55												

Project: LDNR Lake Maurepas **Project Location: Lake Maurepas** **Project Number: 10001431.30001**	**Log of Boring B-14** Sheet 1 of 2

Date(s) Drilled	**8/30/07**	Logged By	**J. Murray**	Checked By	**M. Shewalla**
Drilling Method	**Rotary Mud**	Drill Bit Size/Type	**3 1/2" Wing Bit**	Total Depth Drilled (feet)	**51.0**
Drill Rig Type	**Air Boat**	Drilling Contractor	**ESS**	Sampler Type(s)	**Shelby Tube**
Groundwater Level and Date Measured	**Not Recorded**	Hammer Data	**140 lb Cat Head**	Approximate Surface Elevation	**-0.50 '**
Location	**N-583283.70, E-3502344.35**			Borehole Backfill	**Grout full depth**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
	0		ST-01	24"								
			ST-02	24"			Soft, gray and dark gray CLAY with organic pockets (CH) Disturbed Sample [UU @ 1.2 psi]	96	45	0.28	116	82
-5	5		ST-03	20"			Soft, gray and dark gray CLAY with organic pockets (CH) Disturbed Sample [UU @ 2.0 psi]	95	45	0.26		
			ST-04	15"			Very soft, gray and brown CLAY with organic pockets and organic clay pockets (CH to OH) Disturbed Sample [UU @ 2.8 psi]	123	34	0.13		
-10	10		ST-05	10"								
			ST-06	20"			Very soft, gray and dark gray CLAY with organic pockets and organic clay pockets (CH to OH) [UU @ 4.4 psi]	123	37	0.18	50	27
			ST-07	21"								
-15	15		ST-08	24"			Medium, greenish gray and light gray CLAY with organic and silt pockets (CL)	26			44	23
			ST-09	24"								
-20	20		ST-10	24"			Stiff, greenish gray and light gray CLAY with silt pockets and ferrous nodules (CH) [UU @ 7.6 psi]	23	103	1.57		
-25	25		ST-11	15"			Dense, tan SILT with sand and trace of clay (ML) [96.8% passing #200 sieve]	29			32	4

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
Project Number: 10001431.30001

Log of Boring B-14

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
-30	30		ST-12	12"			Medium, brown, tan and light gray CLAY with sandy silt pockets, streaks and lenses (CH)	40	79	0.51		
-35	35		ST-13	15"			Soft, tan SILT with trace of fine sand and clay (ML) [UU @ 14.0 psi]	28	97	0.46		
-40	40		ST-14	4"			Soft, tan SILT with trace of fine sand and clay (ML)	27			29	3
-45	45		ST-15	24"			Stiff, gray CLAY with trace of organics (CH) [UU @ 18.0 psi]	35	85	1.80	72	51
-50	50		ST-16	24"			Stiff, gray CLAY with shell fragments and trace of organics (CH) [UU @ 17.1 psi]	34	89	1.45		
-55	55						Bottom of boring at 51' bgs					

Project: LDNR Lake Maurepas **Project Location: Lake Maurepas** **Project Number: 10001431.30001**	**Log of Boring B-15** Sheet 1 of 2

Date(s) Drilled	**8/30/07**	Logged By	**J. Murray**	Checked By	**M. Shewalla**
Drilling Method	**Rotary Mud**	Drill Bit Size/Type	**3 1/2" Wing Bit**	Total Depth Drilled (feet)	**51.0**
Drill Rig Type	**Air Boat**	Drilling Contractor	**ESS**	Sampler Type(s)	**Shelby Tube**
Groundwater Level and Date Measured	**Not Recorded**	Hammer Data	**140 lb Cat Head**	Approximate Surface Elevation	**-0.40 '**
Location	**N-584082.59, E-3501143.64**			Borehole Backfill	**Grout full depth**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
	0		ST-01	15"								
			ST-02	12"			Very soft, gray CLAY with organic pockets (CH) [UU @ 1.2 psi]	130	37	0.23	170	110
-5	5		ST-03	11"			Very soft, gray CLAY with organic pockets (CH) [UU @ 2.0 psi]	132	34	0.24		
			ST-04	6"								
-10	10		ST-05	20"			Very soft, greenish gray and light gray CLAY with trace of organics (CH) [UU @ 3.6 psi]	75	62	0.11	51	34
			ST-06	22"								
			ST-07	20"			Medium, greenish gray and light gray CLAY with trace of organic pockets (CH)	32			55	38
-15	15		ST-08	15"								
			ST-09	20"								
-20	20		ST-10	24"			Medium, greenish gray and light gray CLAY with calcareous nodules (CH) [UU @ 10.1 psi]	27	100	0.80	56	37
-25	25		ST-11	24"			Stiff, brown, tan and light gray CLAY with trace of silt and ferrous nodules (CH) [UU @ 10.0 psi]	29	91	1.56		

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
Project Number: 10001431.30001

Log of Boring B-15

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
-30	30		ST-12	20"			Stiff, tan and light gray CLAY with silt pockets and ferrous nodules (CH) [UU @ 12.0 psi]	28	91	1.31	68	44
-35	35		ST-13	20"								
-40	40		ST-14	24"			Medium to stiff, light gray and tan CLAY with trace of silt pockets and ferrous nodules (CH)	39	80	1.04	80	55
-45	45		ST-15	24"			Stiff, light gray and tan CLAY with trace of silt pockets and ferrous nodules (CH)	30	91	1.29		
-50	50		ST-16	24"			Stiff, light gray and tan CLAY with trace of silt pockets and ferrous nodules (CH)	34	85	1.45	85	55
							Bottom of boring at 51' bgs					
-55	55											

Project: LDNR Lake Maurepas **Project Location: Lake Maurepas** **Project Number: 10001431.30001**	**Log of Boring B-16** Sheet 1 of 2

Date(s) Drilled	**8/30/07**	Logged By	**J. Murray**	Checked By	**M. Shewalla**
Drilling Method	**Rotary Mud**	Drill Bit Size/Type	**3 1/2" Wing Bit**	Total Depth Drilled (feet)	**51.0**
Drill Rig Type	**Air Boat**	Drilling Contractor	**ESS**	Sampler Type(s)	**Shelby Tube**
Groundwater Level and Date Measured	**Not Recorded**	Hammer Data	**140 lb Cat Head**	Approximate Surface Elevation	**-2.30 '**
Location	**N-585264.10, E-3499959.56**			Borehole Backfill	**Grout full depth**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
	0											
			ST-01	5"								
-5			ST-02	4"			Very soft, gray and dark gray CLAY with organics (CH to OH)	177			180	137
	5		ST-03	NR								
							Very soft, gray and dark gray CLAY with organics (CH)					
			ST-04	10"				54			55	37
-10							Soft, greenish gray and light gray CLAY with vertical root masses (CH)					
			ST-05	20"			[UU @ 3.6 psi]	48	69	0.36	62	44
	10											
			ST-06	15"								
-15							Stiff, greenish gray and light gray SILTY CLAY with vertical root masses (CL)					
			ST-07	18"				25			44	28
	15		ST-08	20"								
			ST-09	6"								
-20							Medium, greenish gray and light gray CLAY with trace of organics (CH)					
			ST-10	24"			[UU @ 7.6 psi]	27	96	0.55	61	45
	20											
-25												
							Stiff, brown and tan SILTY CLAY with trace of fine sand (CL)					
	25		ST-11	10"				30			33	10

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
Project Number: 10001431.30001

Log of Boring B-16

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
-30												
	30		ST-12	15"			Stiff, tan and light gray SILTY CLAY (CL) [UU @ 12.0 psi]	23	107	1.24		
-35												
	35		ST-13	20"			Stiff, tan and light gray CLAY with silt pockets (CH)	26	98	1.53		
-40												
	40		ST-14	24"			Stiff to very stiff, light gray and tan CLAY with silt pockets (CH) [UU @ 13.5 psi]	28	98	2.81	77	53
-45												
	45		ST-15	8"			Medium, tan, brown and light gray SILTY CLAY with trace of fine sand and ferrous nodules (CL)	27	97	0.89		
-50												
	50		ST-16	20"			Stiff, tan and light gray CLAY with silty clay layers (CH) [UU @ 20.0 psi]	27	97	1.59		
-55							Bottom of boring at 51' bgs					
	55											

Project: LDNR Lake Maurepas **Project Location: Lake Maurepas** **Project Number: 10001431.30001**	**Log of Boring B-17** Sheet 1 of 2

Date(s) Drilled	**9/3/07**	Logged By	**J. Murray**	Checked By	**M. Shewalla**
Drilling Method	**Rotary Mud**	Drill Bit Size/Type	**3 1/2" Wing Bit**	Total Depth Drilled (feet)	**51.0**
Drill Rig Type	**Air Boat**	Drilling Contractor	**ESS**	Sampler Type(s)	**Shelby Tube**
Groundwater Level and Date Measured	**Not Recorded**	Hammer Data	**140 lb Cat Head**	Approximate Surface Elevation	**0.30 '**
Location	**N-586688.18, E-3499945.87**			Borehole Backfill	**Grout full depth**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
0	0											
			ST-01	10"			Very Soft, Greenish Gray and Brown CLAY with organics (CH to OH)					
			ST-02	11"				177			184	137
							Very Soft, Gray and Dark Gray Muck CLAY with organics (CH to OH)					
-5	5		ST-03	12"				190			203	151
			ST-04	8"								
			ST-05	15"								
-10	10						Very Soft, Organic CLAY with clay and organics (OH)					
			ST-06	14"				302			285	188
			ST-07	20"								
-15	15		ST-08	21"								
							Very Soft, Light Gray and Dark Gray SILTY CLAY with organic pockets (CL)					
			ST-09	24"			[UU @ 6.8 psi]	47	79	0.18	45	28
							Stiff, Greenish Gray and Light Gray SILTY CLAY with clay (CL)					
			ST-10	24"			[UU @ 10.1 psi]	24	104	1.84		
-20	20											
							Very stiff, Greenish Gray and Light Gray CLAY with trace of silt pockets (CH)					
-25	25		ST-11	24"				22	107	2.16		

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
Project Number: 10001431.30001

Log of Boring B-17

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
-30	30		ST-12	24"			Medium, Light Green and Light Gray CLAY with calcareous nodules (CH)	33	86	0.95	91	63
-35	35		ST-13	21"			Medium, Greenish Gray and Light Gray CLAY with calcareous nodules (CH)	38	82	0.53		
-40	40		ST-14	18"			Stiff, Greenish Gray and Light Gray CLAY with calcareous nodules (CH)	31	92	0.78	56	35
-45	45		ST-15	20"			Soft, Tan and Light Gray SILTY CLAY with silt (CL) [UU @ 18.0 psi]	33	94	0.26	36	16
-50	50		ST-16	24"			Stiff, Tan and Light Gray CLAY with calcareous nodules and silt pockets (CH)	37	86	1.10		
-55	55						Bottom of boring at 51' bgs					

Project: LDNR Lake Maurepas **Project Location: Lake Maurepas** **Project Number: 10001431.30001**	**Log of Boring B-18** Sheet 1 of 2

Date(s) Drilled	**9/3/07**	Logged By	**J. Murray**	Checked By	**M. Shewalla**
Drilling Method	**Rotary Mud**	Drill Bit Size/Type	**3 1/2" Wing Bit**	Total Depth Drilled (feet)	**51.0**
Drill Rig Type	**Air Boat**	Drilling Contractor	**ESS**	Sampler Type(s)	**Shelby Tube**
Groundwater Level and Date Measured	**Not Recorded**	Hammer Data	**140 lb Cat Head**	Approximate Surface Elevation	**-3.10 '**
Location	**N-588144.78, E-3499879.01**			Borehole Backfill	**Grout full depth**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
	0											
			ST-01	10"								
-5							Very Soft, Gray and Black CLAY with organic pockets and organic clay (CH/OH)					
			ST-02	8"				217			146	110
							Very Soft, Gray and Black CLAY with organic pockets and Organic CLAY (CH/OH)					
	5		ST-03	10"			[UU @ 2.0 psi]	173	19	0.18		
							Very Soft, Gray and Black Organic CLAY and CLAY with organics (OH)					
-10			ST-04	12"				552			472	170
							Very Soft, Brown and Black Organic CLAY with organics (OH)					
			ST-05	21"				408			575	300
	10											
			ST-06	18"								
-15							Very Soft, Gray, Brown and Black Organic CLAY with organics (OH)					
			ST-07	24"			[UU @ 5.2 psi]	200	26	0.07		
	15		ST-08	24"								
-20			ST-09	24"								
							Soft, Greenish Gray and Light Gray CLAY (CH)					
			ST-10	24"				40	84	0.43	70	51
	20											
-25												
							Stiff, Greenish Gray and Light Gray CLAY (CH)					
	25		ST-11	24"				23	104	1.82	53	32

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
Project Number: 10001431.30001

Log of Boring B-18

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
-30												
	30		ST-12	24"			Very Stiff, Greenish Gray and Light Gray CLAY (CH)	21	109	3.45		
-35												
	35		ST-13	24"			Very Stiff, Greenish Gray and Light Gray SILTY CLAY (CL)	20	110	3.06	47	31
-40												
	40		ST-14	24"			Very Stiff, Greenish Gray and Light Gray SILTY CLAY (CL)	21	106	2.91	48	23
-45												
	45		ST-15	20"			Very Stiff, Greenish Gray, Tan and Light Gray SILTY CLAY (CL)	17	113	3.82		
-50												
	50		ST-16	22"			Stiff, Greenish Gray and Light Gray CLAY with calcareous nodules (CH)	28	97	1.22	63	46
-55							Bottom of boring at 51' bgs					
	55											

Project: LDNR Lake Maurepas **Project Location: Lake Maurepas** **Project Number: 10001431.30001**	**Log of Boring B-19** Sheet 1 of 2

Date(s) Drilled	**9/3/07**	Logged By	**J. Murray**	Checked By	**M. Shewalla**
Drilling Method	**Rotary Mud**	Drill Bit Size/Type	**3 1/2" Wing Bit**	Total Depth Drilled (feet)	**51.0**
Drill Rig Type	**Air Boat**	Drilling Contractor	**ESS**	Sampler Type(s)	**Shelby Tube**
Groundwater Level and Date Measured	**Not Recorded**	Hammer Data	**140 lb Cat Head**	Approximate Surface Elevation	**0.00 '**
Location	**N-589474.49, E-3499884.19**			Borehole Backfill	**Grout full depth**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
0	0											
			ST-01	12"			Very Soft, Gray and Black Organic CLAY with organics (OH)					
			ST-02	5"				220			185	129
							Very Soft, Black and Brown Organic CLAY with organics (OH)					
-5	5		ST-03	15"				166	27	0.09	340	197
							Very Soft, Gray CLAY and Black and Brown Organic Clay with organics (CH/OH)					
			ST-04	11"				157	32	0.10	293	254
			ST-05	20"								
-10	10						Soft, Gray, Light Gray and Dark Gray CLAY with organics, silt pockets and vertical roots (CH)					
			ST-06	21"			[UU @ 4.4 psi]	38	87	0.33		
							Medium, Greenish Gray and Light Gray CLAY with silt and organics (CH)					
			ST-07	24"				35			58	42
-15	15		ST-08	24"								
			ST-09	21"								
							Very Soft, Greenish Gray and Light Gray CLAY with silt and organic pockets (CH)					
			ST-10	24"			[UU @ 7.6 psi]	38	75	0.19		
-20	20											
							Stiff, Greenish Gray and Light Gray CLAY with trace of silt (CH)					
-25	25		ST-11	24"				26	100	1.41	67	51

Project: LDNR Lake Maurepas
Project Location: Lake Maurepas
Project Number: 10001431.30001

Log of Boring B-19

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	Compressive Strength, tsf	Liquid Limit, %	Plastic Index, %
-30	30		ST-12	20"			Stiff, Greenish Gray and Light Gray CLAY with trace of silt and roots (CH)	26	100	1.58		
-35	35		ST-13	18"			Stiff, Greenish Gray and Light Gray SILTY CLAY with roots (CL)	23	100	1.72	50	33
-40	40		ST-14	24"			Stiff, Greenish Gray and Light Gray SILTY CLAY with silt pockets (CL)	22	105	1.74	48	33
-45	45		ST-15	24"			Stiff, Greenish Gray and Light Gray CLAY with trace of silt (CL)	23	104	1.87	50	34
-50	50		ST-16	24"			Stiff, Greenish Gray and Light Gray CLAY with trace of silt (CH)	22	107	1.85	60	43
-55	55						Bottom of boring at 51' bgs					

Project: LAKE MAUREPAS DIVERSION **Project Location: GARYVILLE, LOUISIANA** **Project Number: 19229541.00001**	**Log of Boring B-1** Sheet 1 of 5

Date(s) Drilled	**8/4/11 - 8/9/11**	Logged By	**Bukkapatnam, Ananth**	Checked By	**Shewalla, Mahendra**
Drilling Method	**Solid Stem/ Rotary Wash Drilling**	Drill Bit Size/Type	**5.5" Wing Bit**	Total Depth Drilled (feet)	**130.0**
Drill Rig Type	**Diedrich D-50**	Drilling Contractor	**SESI**	Sampler Type(s)	**Shelby Tube/ Split Spoon**
Groundwater Level and Date Measured	**8.0' after 15 min**	Hammer Data	**140 lbs, 30 inch drop**	Approximate Surface Elevation	**8.9'**
Location	**N564749.90,E3499953.11**			Borehole Backfill	**Cement Bentonite Grout**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Torvane (tsf)	Hand Penetrometer (tsf)	Water Content, %	Dry Unit Weight, pcf	Cohesion (ksf)	Liquid Limit, %	Plastic Index, %
	0						Loose; Tan SILTY SAND (SM)							
				16	2					17				
							Soft; Tan and Brown LEAN CLAY (CL)							
				14	2		[94.8% passing #200 sieve]			30				
5							Brown SILT (ML) w/ clay strata and lenses							
	5			43						36				
										35				
							Gray and Tan SILT (ML) w/ clay pockets							
										33			33	9
										32				
							Gray and Brown SILT (ML) w/ clay strata and lenses, sand strata and lenses							
0				43					0.50	32				
	10									32				
							Gray SILT (ML) w/ clay pockets							
							[95.7% passing #200 sieve]			38				
										34				
				26					0.50	29				
							Gray SILTY SAND (SM)							
-5							[43.7% passing #200 sieve]			29			NP	NP
							NO RECOVERY							
	15						NO RECOVERY							
							Gray SILT (ML) w/ clay strata and lenses							
				48					0.50	31				
										38				
										38				
-10							NO RECOVERY							
	20						Gray SILT (ML) w/ clay strata and lenses							
				46					0.75	31				
										30				
							Gray SANDY SILT (ML)							
							[63.5% passing #200 sieve]			28				
							NO RECOVERY							
-15														
				45			Soft; Gray LEAN CLAY (CL)							
	25								0.50	33				
							Soft; Gray LEAN CLAY (CL) w/ silt lenses and pockets							
										34				

Project: LAKE MAUREPAS DIVERSION
Project Location: GARYVILLE, LOUISIANA
Project Number: 19229541.00001

Log of Boring B-1

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Torvane (tsf)	Hand Penetrometer (tsf)	Water Content, %	Dry Unit Weight, pcf	Cohesion (ksf)	Liquid Limit, %	Plastic Index, %
							[UU @ 17.8psi; 20.4psi and 31.1psi][Consolidation Test]			36	84	0.47	47	28
										35				
				45			Soft; Gray LEAN CLAY (CL)		0.50	66				
-20														
	30									65				
							Soft; Gray LEAN CLAY (CL) w/ silt lenses [3.1% Sand; 55.1% Silt; 41.8% Clay]			37	84	0.41	46	26
										42				
				46			Soft; Gray CLAY (CH) w/ silt strata and lenses		1.00	58				
							Gray CLAY (CH) w/ organic pockets [2.4% Organic Content]			44				
-25														
	35									56				
										62				
				44					0.75	111				
										111				
							Medium; Dark Gray CLAY (CH) w/ organics [UU @ 22.6psi; 34.2psi and 35.9psi][9.6% Organic Content][Consolidation Test]			96	46	0.94	161	118
-30														
	40									79				
				45			Medium; Gray CLAY (CH)		0.75	38				
										32				
										35				
							Gray SILT (ML) w/ sand and clay pockets [28.1% Sand; 64.1% Silt; 7.8% Clay]			38			NP	NP
-35														
				47			Stiff; Gray CLAY (CH)		1.25	47				
	45													
										50				
							Medium; Gray CLAY (CH) w/ shell pockets			42	65	0.88		
										51				
				47			Stiff; Gray CLAY (CH)		1.50	39				
-40														
	50									44				
							Gray CLAY (CH) w/ shell fragments [Consolidation Test]			52			86	62
										37				
				39					1.75	25				
-45										36				
							Stiff; Greenish Gray LEAN CLAY (CL) w/ concretions [UU @ 29.0psi; 40.6psi and 42.3psi]			25	104	1.05		
	55						NO RECOVERY							

Project: LAKE MAUREPAS DIVERSION
Project Location: GARYVILLE, LOUISIANA
Project Number: 19229541.00001

Log of Boring B-1

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Torvane (tsf)	Hand Penetrometer (tsf)	Water Content, %	Dry Unit Weight, pcf	Cohesion (ksf)	Liquid Limit, %	Plastic Index, %
				24					1.25	22				
							Greenish Gray and Light Gray LEAN CLAY (CL) w/ silt [1.7% Sand; 65.5% Silt; 32.8% Clay]			23			39	22
							NO RECOVERY							
-50							NO RECOVERY							
	60						Stiff; Gray LEAN CLAY (CL)							
				47					2.25	26				
							Stiff; Tan and Light Gray LEAN CLAY (CL) w/ sandy silt pockets			27				
							[UU @ 32.2psi; 43.8psi and 45.5psi]			27	97	1.26	40	23
-55										27				
				48			Stiff; Tan, Light Gray and Brown CLAY (CH)							
	65								1.25	37				
										37				
							Stiff; Tan and Light Gray CLAY (CH), jointed			42	83	1.20		
										30				
				48					2.25	24				
-60										34				
	70						Alternating Layers of Tan, Brown and Light Gray LEAN CLAY (CL) and SANDY SILT (ML)			39			35	15
							NO RECOVERY							
				48					2.00	31				
							Very Stiff; Tan and Light Gray CLAY (CH) w/ silt pockets and streaks			30				
-65														
	75						[UU @ 37.0psi; 48.6psi and 50.3psi]			33	86	2.39		
							NO RECOVERY							
				47					2.50	39				
							Stiff; Tan, Brown and Light Gray CLAY (CH)			46				
-70										39				
	80									40				
				48					2.50	26				
							Stiff; Light Brown LEAN CLAY (CL) w/ sandy silt layers and pockets			34				
							[UU @ 40.2psi; 51.8psi and 53.5psi]			35	84	1.15	48	31
-75										42				
				47			Tan, SANDY SILT (ML)		2.00	27				
	85						Alternating Layers of Gray CLAY (CH) and SILT (ML)			33				

Project: LAKE MAUREPAS DIVERSION
Project Location: GARYVILLE, LOUISIANA
Project Number: 19229541.00001

Log of Boring B-1

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Torvane (tsf)	Hand Penetrometer (tsf)	Water Content, %	Dry Unit Weight, pcf	Cohesion (ksf)	Liquid Limit, %	Plastic Index, %
										37				
							Medium; Gray CLAY (CH) w/ silt lenses and layers [UU @ 42.2psi; 53.8psi and 55.5psi]			40	79	0.95	52	33
				47			Gray LEAN CLAY (CL)		1.25	34				
-80														
	90									34				
							Alternating Layers of Gray CLAY (CH) and Tan LEAN CLAY (CL)			35			77	55
										42				
				48			Stiff; Gray CLAY (CH) w/ sand strata and lenses		1.50	38				
-85										48				
							Stiff; Gray CLAY (CH) w/ silt lenses and pockets [UU @ 45.0psi; 56.6psi and 58.3psi]			38	85	1.09		
	95													
										34				
				48			Stiff; Gray CLAY (CH) w/ sand strata and lenses		1.25	35				
										36				
							Gray CLAY (CH) w/ silt lenses							
-90										39			64	42
							Stiff; Gray CLAY (CH) w/ silt pockets and lenses [UU @ 47.0psi; 58.6psi and 82.0psi]			36	84	1.67		
	100													
				48			Stiff; Gray CLAY (CH) w/ sand strata and lenses		1.25	39				
										33				
							Stiff; Gray CLAY (CH) w/ shells and silt lenses [UU @ 48.2psi; 59.8psi and 61.5psi]			33	90	1.63		
-95										34				
				48			Stiff; Light Gray CLAY (CH) w/ silt strata and lenses		1.25	40				
	105													
										37				
							Gray CLAY (CH)			37			65	42
										44				
				48					1.25	47				
-100														
	110									46				
							Stiff; Gray CLAY (CH)			47	74	1.69		
										49				
				48			Stiff; Gray CLAY (CH)		1.50	49				
										50				
-105							Gray CLAY (CH)							
	115									48			87	59
										48				
				47					1.25	48				

Project: LAKE MAUREPAS DIVERSION
Project Location: GARYVILLE, LOUISIANA
Project Number: 19229541.00001

Log of Boring B-1

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Torvane (tsf)	Hand Penetrometer (tsf)	Water Content, %	Dry Unit Weight, pcf	Cohesion (ksf)	Liquid Limit, %	Plastic Index, %
										46				
							Stiff; Gray CLAY (CH) [UU @ 54.6psi; 66.2psi and 67.9psi]			47	76	1.68		
-110														
	120									44				
				47			Stiff; Gray CLAY (CH)		1.25	44				
										47				
							Gray CLAY (CH)			44			89	62
-115										36				
	125			48					1.50	40				
										42				
							Very Stiff; Gray CLAY (CH) w/ silt pockets			44	79	2.13		
										44				
				48			Stiff; Gray CLAY (CH)		1.50	45				
-120							Gray CLAY (CH)							
	130									45			82	54
							Bottom of Hole @ 130.0' bgs Note 1: All samples were collected using a 48" long Piston Sampler Note 2: Strength's shown are average values of 3-point UU test							
-125														
	135													
-130														
	140													
-135														
	145													

Project: LAKE MAUREPAS DIVERSION **Project Location: GARYVILLE, LOUISIANA** **Project Number: 19229541.00001**	**Log of Boring B-2A** Sheet 1 of 2

Date(s) Drilled	**8/18/11 - 8/18/11**	Logged By	**Bukkapatnam, Ananth**	Checked By	**Shewalla, Mahendra**
Drilling Method	**Solid Stem/ Rotary Wash Drilling**	Drill Bit Size/Type	**5.5" Wing Bit**	Total Depth Drilled (feet)	**40.0**
Drill Rig Type	**Diedrich D-50**	Drilling Contractor	**SESI**	Sampler Type(s)	**Shelby Tube/ Split Spoon**
Groundwater Level and Date Measured	**6.7' after 15 min**	Hammer Data	**140 lbs, 30 inch drop**	Approximate Surface Elevation	**6.7'**
Location	**N565554.00, E3500470.89**			Borehole Backfill	**Cement Bentonite Grout**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Torvane (tsf)	Hand Penetrometer (tsf)	Water Content, %	Dry Unit Weight, pcf	Cohesion (ksf)	Liquid Limit, %	Plastic Index, %
	0						Stiff; Brown and Gray CLAY (CH)			27				
5										27				
										27				
				46					2.25	34				
							Stiff; Brown and Gray CLAY (CH)			43				
	5									41				
0							Medium; Gray and Brown CLAY (CH) w/ ferrous nodules [1.7% Sand; 39.7% Silt; 58.6% Clay] [2.4% Organic Content]			41			64	45
				41					0.50	39				
							Soft; Gray CLAY (CH) w/ silt strata or lenses			36				
										35				
	10			36			Medium; Gray and Brown CLAY (CH), jointed [98.4% passing #200 sieve][3.0% Organic Content]		1.00	53	72	0.60		
-5							[11' - 12' - No Sample Recovered]							
							Medium; Gray CLAY (CH)			53				
										43				
							Gray CLAY (CH), jointed [2.6% Organic Content]			46				
	15			48					1.25	53				
-10							Medium; Gray CLAY (CH) w/ organics			55				
										58				
							Medium; Gray CLAY (CH), jointed [UU @ 10.1psi; 21.8psi and 23.4psi]			55	68	0.74	98	63
				41					0.75	57				
	20						Soft; Gray and Dark Gray CLAY (CH) w/ organics			75				
-15										93				
				35			Soft; Black and Dark Gray ORGANIC CLAY (OH) w/ organics [17.7% Organic Content]		0.50	150			231	145
							[23' - 24' - No Sample Recovered]							
							Soft; Gray and Dark Gray CLAY (CH) w/ organics			77				
	25									63				

Project: LAKE MAUREPAS DIVERSION
Project Location: GARYVILLE, LOUISIANA
Project Number: 19229541.00001

Log of Boring B-2A

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Torvane (tsf)	Hand Penetrometer (tsf)	Water Content, %	Dry Unit Weight, pcf	Cohesion (ksf)	Liquid Limit, %	Plastic Index, %
-20				37			Soft; Dark Gray and Black CLAY (CH) w/ organics		0.50	97	47	0.45		
							[27' - 28' - No Sample Recovered]							
							Gray SANDY SILT (ML) w/ clay strata or lenses			39				
	30									36				
							Soft; Gray CLAY (CH) w/ silt and shells			71			89	65
-25				47					0.50	70				
							Soft; Gray CLAY (CH) w/ silt strata or lenses			71				
							Soft; Gray CLAY (CH) w/ shell fragments [UU @ 16.1psi; 27.8psi and 29.4psi]			74	57	0.36		
	35									71				
				47					1.25	66				
-30							Soft; Gray CLAY (CH) w/ silt strata or lenses			65				
										59				
							Stiff; Greenish Gray and Gray CLAY (CH) w/ silt strata or lenses			28				
	40			45					1.25	25				
-35							Bottom of Hole @ 40.0' bgs Note 1: All samples were collected using a 48" long Piston Sampler Note 2: Strength's shown are average values of 3-point UU test							
	45													
-40														
	50													
-45														
	55													

Project: LAKE MAUREPAS DIVERSION **Project Location: GARYVILLE, LOUISIANA** **Project Number: 19229541.00001**	**Log of Boring B-3A** Sheet 1 of 2

Date(s) Drilled	**8/17/11 - 8/17/11**	Logged By	**Bukkapatnam, Ananth**	Checked By	**Shewalla, Mahendra**
Drilling Method	**Solid Stem/ Rotary Wash Drilling**	Drill Bit Size/Type	**5.5" Wing Bit**	Total Depth Drilled (feet)	**40.0**
Drill Rig Type	**Diedrich D-50**	Drilling Contractor	**SESI**	Sampler Type(s)	**Shelby Tube/ Split Spoon**
Groundwater Level and Date Measured	**8.3' after 15 min**	Hammer Data	**140 lbs, 30 inch drop**	Approximate Surface Elevation	**6.7'**
Location	**N565694.35, E3500536.99**			Borehole Backfill	**Cement Bentonite Grout**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Torvane (tsf)	Hand Penetrometer (tsf)	Water Content, %	Dry Unit Weight, pcf	Cohesion (ksf)	Liquid Limit, %	Plastic Index, %
	0						Very Stiff; Brown and Light Gray CLAY (CH) w/ silt strata and streaks			21				
5										28				
							Stiff; Brown and Light Gray CLAY (CH) w/ silt strata and streaks			35				
				46					2.50	30				
							Medium; Gray and Brown CLAY (CH) w/ wood			53				
	5									51				
0							Light Gray and Tan CLAY (CH) w/ ferrous nodules, silt [2.6% Organic Content]			30				
				43					0.75	40				
							Soft; Gray CLAY (CH) w/ silt strata and streaks			42				
										49				
	10						Soft; Gray CLAY (CH), jointed [8.1% Silt; 91.9% Clay][2.5% Organic Content]			56	67	0.37	91	58
-5				46					1.00	53				
							Soft; Gray CLAY (CH) w/ silt strata and streaks			50				
										52				
	15									47				
				45					0.75	48				
-10							Soft; Gray CLAY (CH) w/ silt strata and streaks, wood			59				
										74				
							Medium; Gray CLAY (CH), jointed [99.0%passing #200 sieve][2.8% Organic Content] [UU @ 10.8psi; 22.5psi and 24.1psi]			59	65	0.58	94	63
				43					1.25	55				
	20						Soft; Gray CLAY (CH) w/ organics			78				
-15										272				
							Medium; Black and Dark Gray ORGANIC CLAY (OH) w/ clay strata and streaks			109				
				47			PEAT and ORGANICS w/ clay [20.2% Organic Content]		0.50	191			266	166
	25						Soft; Gray CLAY (CH) w/ organics, silt strata and streaks			79				
										81				

Project: LAKE MAUREPAS DIVERSION
Project Location: GARYVILLE, LOUISIANA
Project Number: 19229541.00001

Log of Boring B-3A

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Torvane (tsf)	Hand Penetrometer (tsf)	Water Content, %	Dry Unit Weight, pcf	Cohesion (ksf)	Liquid Limit, %	Plastic Index, %
-20										51				
				46					0.50	56				
							Soft; Gray CLAY (CH) w/ silt strata and streaks, organics			56				
							Soft; Gray CLAY (CH) w/ silt lenses and layers [UU @ 15.2psi; 26.9psi and 28.5psi]			50	72	0.31		
	30									47				
-25				48					0.50	68				
							Soft; Gray CLAY (CH) w/ slickensides, silt strata and streaks			77				
							Very Soft; Gray CLAY (CH) w/ shell fragments			59	64	0.21	97	71
	35									43				
				48					0.50	65				
-30							Soft; Gray CLAY (CH) w/ slickensides, silt strata and streaks			76				
										62				
							Stiff; Grennish Gray and Light Gray CLAY (CH) w/ silt strata and streaks			28				
				47					2.00	22				
	40						Bottom of Hole @ 40.0' bgs							
-35							Note 1: All samples were collected using a 48" long Piston Sampler							
							Note 2: Strength's shown are average values of 3-point UU test							
	45													
-40														
	50													
-45														
	55													

Project: LAKE MAUREPAS DIVERSION **Project Location: GARYVILLE, LOUISIANA** **Project Number: 19229541.00001**	**Log of Boring B-4A** Sheet 1 of 2

Date(s) Drilled	**8/16/11 - 8/16/11**	Logged By	**Bukkapatnam, Ananth**	Checked By	**Shewalla, Mahendra**
Drilling Method	**Solid Stem/ Rotary Wash Drilling**	Drill Bit Size/Type	**5.5" Wing Bit**	Total Depth Drilled (feet)	**41.0**
Drill Rig Type	**Diedrich D-50**	Drilling Contractor	**SESI**	Sampler Type(s)	**Shelby Tube/ Split Spoon**
Groundwater Level and Date Measured	**14.2' after 15 min**	Hammer Data	**140 lbs, 30 inch drop**	Approximate Surface Elevation	**6.6'**
Location	**N565864.08, E3500618.35**			Borehole Backfill	**Cement Bentonite Grout**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Torvane (tsf)	Hand Penetrometer (tsf)	Water Content, %	Dry Unit Weight, pcf	Cohesion (ksf)	Liquid Limit, %	Plastic Index, %
	0						Stiff; Brown and Gray CLAY (CH) w/ sand strata and lenses, silt strata and lenses			23				
5										22				
										19				
				42					4.25	25				
							Stiff; Gray and Brown CLAY (CH) w/ sand strata and lenses, silt strata and lenses			41				
	5									31				
0							Gray and Brown CLAY (CH) w/ silt, ferrous nodules [2.9% Organic Content]			28				
				48					1.25	32				
							Stiff; Gray CLAY (CH) w/ silt strata and lenses			41				
							Stiff; Gray and Tan CLAY (CH) w/ silt strata and lenses			38				
	10						Medium; Light Gray and Brown CLAY (CH), jointed [2.5% Organic Content]			55	70	0.54		
-5				42					0.75	52				
							Stiff; Gray CLAY (CH) w/ silt strata and lenses			52				
										49				
							Gray CLAY (CH), jointed [16.6% Silt; 83.4% Clay][2.3% Organic Content]			49			77	52
	15			42						57				
-10							Soft; Gray CLAY (CH) w/ silt strata and lenses, organics		0.75	62				
										56				
							Medium; Gray CLAY (CH) w/ organic pockets, calcium nodules, jointed [99.1% passing #200 sieve] [UU @ 13.4psi; 25.0psi and 26.7psi]			61	64	0.65	97	66
				43					0.75	60				
	20						Medium; Gray and Dark Gray ORGANIC CLAY (OH) w/ organics			188				
-15							ORGANICS w/ clay			142			216	171
							Medium; Gray CLAY (CH) w/ silt strata and lenses			57				
				43					0.50	60				
							Soft; Gray CLAY (CH) w/ silt strata and lenses			61				
	25						Soft; Gray CLAY (CH) w/ organic pockets			67	61	0.51		

Project: LAKE MAUREPAS DIVERSION
Project Location: GARYVILLE, LOUISIANA
Project Number: 19229541.00001

Log of Boring B-4A

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Torvane (tsf)	Hand Penetrometer (tsf)	Water Content, %	Dry Unit Weight, pcf	Cohesion (ksf)	Liquid Limit, %	Plastic Index, %
-20										62				
				47			Gray SANDY SILT (ML)		0.25	25				
							Medium; Gray CLAY (CH) w/ silt strata and lenses							
				24	WOH					52				
	30													
										65				
-25										69				
										61				
				47					0.50	50				
							Soft; Gray CLAY (CH) w/ slickensides			43				
	35						Soft; Gray ORGANIC CLAY (OH) w/ organics			69				
-30							Medium; Gray CLAY (CH) w/ silt pockets [UU @ 20.6psi; 32.2psi and 33.9psi]			34	89	0.62	52	35
				48					1.25	28				
							Stiff; Gray CLAY (CH) w/ silt strata and lenses			29				
	40									22				
				35					2.50	22				
-35							Bottom of Hole @ 41.0' bgs Note 1: All samples were collected using a 48" long Piston Sampler Note 2: Strength's shown are average values of 3-point UU test							
	45													
-40														
	50													
-45														
	55													

Project: Lake Maurepas - KCS Railroad **Project Location: Garyville, LA** **Project Number: 10001863**	**Log of Boring KCS-01** Sheet 1 of 6

Date(s) Drilled	**1/22/13 - 1/24/13**	Logged By	**M. Shewalla**	Checked By	**A. Bukkapatnam**
Drilling Method	**Auger 0' to 10'; Rotary Wash 10' to 155'**	Drill Bit Size/Type	**4" Auger**	Total Depth Drilled (feet)	**155.0**
Drill Rig Type	**SIMCO 2800**	Drilling Contractor	**APS Testing**	Sampler Type(s)	**Shelby Tube/Split Spoon**
Groundwater Level and Date Measured	**7.0' at 0 Mins; 5.0' after 15 Mins**	Hammer Data	**140 lbs**	Approximate Surface Elevation	**2.6'**
Location	**N572379.75, E3504323.37**			Borehole Backfill	**Cement and Betonite Grout**

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Torvane (tsf)	Hand Penetrometer (tsf)	Water Content, %	Dry Unit Weight, pcf	Cohesion (ksf)	Liquid Limit, %	Plastic Index, %
	0		ST-1	20			Light Gray CLAY (CH) w/ Fe Nodules		1.00	43				
0			ST-2	17			Light Gray to Brown CLAY (CH) w/ Fe Nodules		0.50	45			100	62
	5		ST-3	14			Medium, Light Gray to Brow CLAY (CH) w/ Fe Nodules		0.50	49	72	0.58		
-5			ST-4	22			Medium, Light Gray to Brow CLAY (CH) w/ Fe Nodules [UU @5.0psi]		0.25	39	82	0.52	58	30
	10		ST-5	10			Gray CLAY (CH) w/ Fe Nodules and tree roots		1.25	44			82	49
-10			ST-6	22			Soft, Gray CLAY (CH) w/ organic content [UU @7.8psi]		0.25	99	46	0.32		
	15													
-15			ST-7	23			Soft, Gray CLAY (CH) w/ organic content [UU @9.8psi]		0.25	61	64	0.40	93	61
	20													
-20			ST-8	17			Gray CLAY (CH) w/ organic content		0.25	50			70	43
	25													

Project: Lake Maurepas - KCS Railroad
Project Location: Garyville, LA
Project Number: 10001863

Log of Boring KCS-01

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Torvane (tsf)	Hand Penetrometer (tsf)	Water Content, %	Dry Unit Weight, pcf	Cohesion (ksf)	Liquid Limit, %	Plastic Index, %
-25														
	30		ST-9	22			Medium, Light Gray CLAY (CH)		0.50	30	92	0.61		
-30														
	35		ST-10	23			Gray SILTY CLAY (CL) w/ sand lenses		1.50	21			36	17
-35														
	40		ST-11	20			Stiff, Tan and Light Gray to Brown CLAY (CH)		1.75	37	84	1.15		
-40														
	45		ST-12	16			Stiff, Light Gray to Brown CLAY (CH) w/ sand pockets [UU @19.8psi]		1.25	29	96	1.75		
-45														
	50		SS-13	17	32		Very Firm, Brown SILT (ML) w/ sand			26				
-50														
	55		SS-14	12	24		Firm, Brown SILT (ML) w/ sand			29				

Project: Lake Maurepas - KCS Railroad
Project Location: Garyville, LA
Project Number: 10001863

Log of Boring KCS-01

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Torvane (tsf)	Hand Penetrometer (tsf)	Water Content, %	Dry Unit Weight, pcf	Cohesion (ksf)	Liquid Limit, %	Plastic Index, %
-55														
			SS-15	14	13		Stiff, Light Gray to Brown SILTY CLAY (CL)			28			49	28
	60													
-60														
			ST-16	16			Stiff, Gray to Brown CLAY (CH) w/ silt pockets		1.25	28	96	1.16		
	65													
-65														
			ST-17	13			Gray to Brown CLAY (CH) w/ silt/sand lenses		1.00	35			51	30
	70													
-70														
			ST-18	14			Gray to Brown CLAY (CH) w/ shells		1.00	31			51	32
	75													
-75														
			ST-19	18			Gray to Brown CLAY (CH)		1.00	43			79	52
	80													
-80														
			ST-20	20			Stiff, Gray CLAY (CH) [UU @35.8psi]		1.25	52	71	1.40		
	85													

Project: Lake Maurepas - KCS Railroad
Project Location: Garyville, LA
Project Number: 10001863

Log of Boring KCS-01

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Torvane (tsf)	Hand Penetrometer (tsf)	Water Content, %	Dry Unit Weight, pcf	Cohesion (ksf)	Liquid Limit, %	Plastic Index, %
-85														
			ST-21	21			Gray CLAY (CH)		1.00	48			95	66
	90													
-90														
			ST-22	20			Very Stiff, Gray CLAY (CH) w/ sand lenses [UU @39.8psi]		1.25	46	74	2.27		
	95													
-95														
	100													
			SS-23	13	17		Firm, Gray SANDY SILT (ML)			22				
-100														
			ST-24	19			Stiff, Gray CLAY (CH) w/ sand lenses		1.50	30	95	1.42		
	105													
-105														
			ST-25	13			Firm, Gray SILT (ML) w/ clay [UU @45.8psi]		1.00	31	93	1.63	31	5
	110													
-110														
			SS-26	14	36		Very Firm, SILT (ML) w/ sand			32				
	115													

Project: Lake Maurepas - KCS Railroad
Project Location: Garyville, LA
Project Number: 10001863

Log of Boring KCS-01

Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Torvane (tsf)	Hand Penetrometer (tsf)	Water Content, %	Dry Unit Weight, pcf	Cohesion (ksf)	Liquid Limit, %	Plastic Index, %
-115														
			SS-27	15	17		Firm, Gray SILT (ML) [92.7% passing #200 Sieve]			31				
	120													
-120														
			SS-28	13	14		Stiff, Gray SILTY CLAY (CL) w/ shells			30			48	23
	125													
-125														
			ST-29	16			Gray CLAY (CH) w/ shells		1.00	47				
	130													
-130														
			ST-30	21			Very Stiff, CLAY (CH) w/ silt lenses		1.50	47	75	2.02	78	45
	135													
-135														
			ST-31	7			Gray SAND (SP) w/ silt [5.2% passing #200 Sieve]			26				
	140													
-140														
			SS-32	14	45		Very Dense, Gray SILTY SAND (SM)							
	145													

Project: Lake Maurepas - KCS Railroad
Project Location: Garyville, LA
Project Number: 10001863

Log of Boring KCS-01

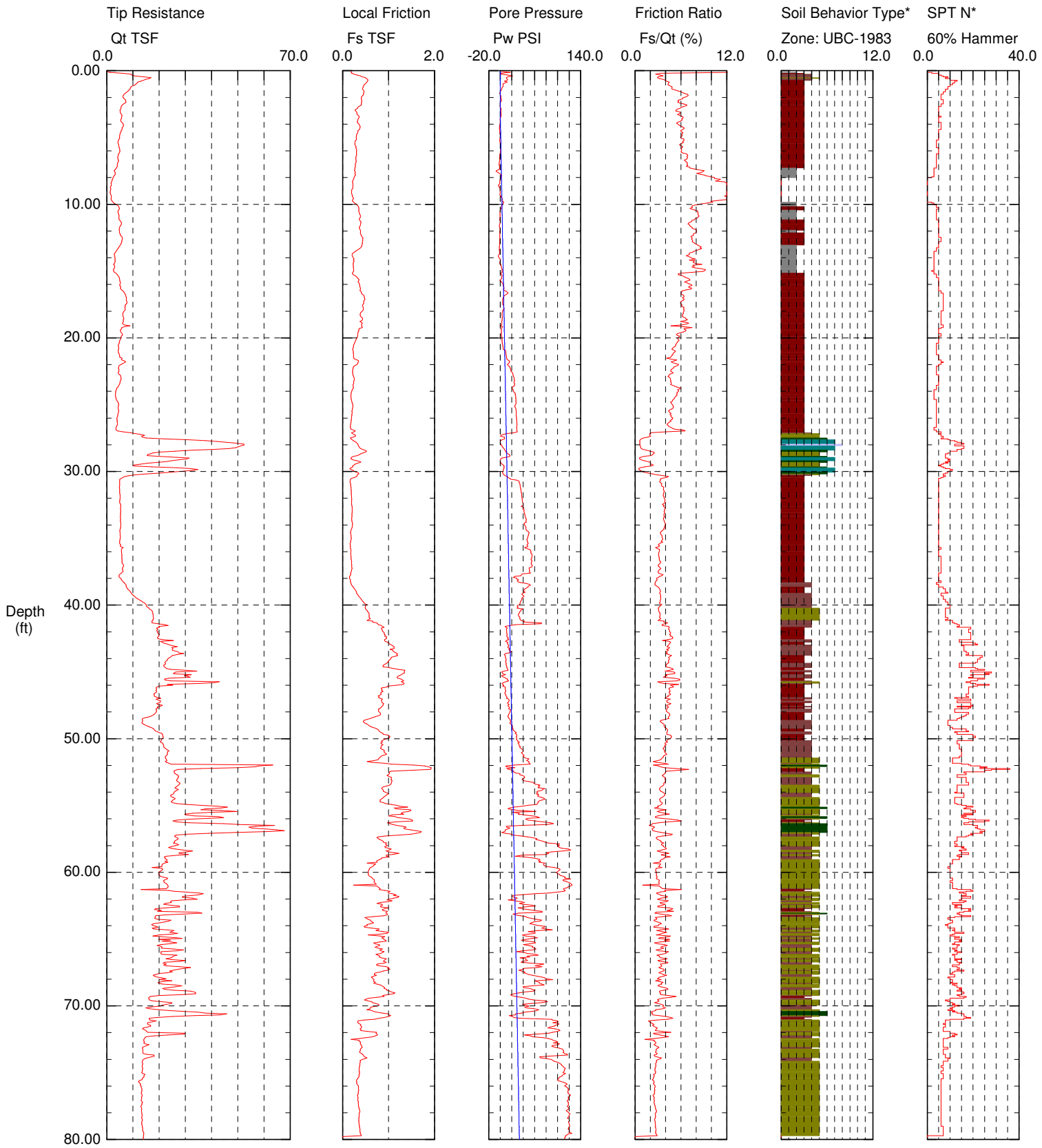
Elevation feet	Depth, feet	SAMPLES Type	Number	Recovery, in.	Sampling Resistance, blows / ft	Graphic Log	MATERIAL DESCRIPTION	Torvane (tsf)	Hand Penetrometer (tsf)	Water Content, %	Dry Unit Weight, pcf	Cohesion (ksf)	Liquid Limit, %	Plastic Index, %
-145														
			SS-33	9	43		Dense, Gray SILTY SAND to SAND (SP-SM)			28				
	150													
-150														
			SS-34	NR	>50		Very Dense, Gray SILTY SAND to SAND (SP-SM)							
	155						Bottom of Hole - 155' bgs							
-155														
	160													
-160														
	165													
-165														
	170													
-170														
	175													
-175														

*Soil behavior type and SPT based on data from UBC-1983

Southern Earth Sciences, Inc.

Operator: TTC
Sounding: CPT-01 ELEV. 7.20 FT
Cone Used: DDG0899

CPT Date/Time: 9/12/2007 11:44:22 AM
Location: LAKE MAUREPAS
Job Number: B07-163



Maximum Depth = 80.05 feet

Depth Increment = 0.00 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

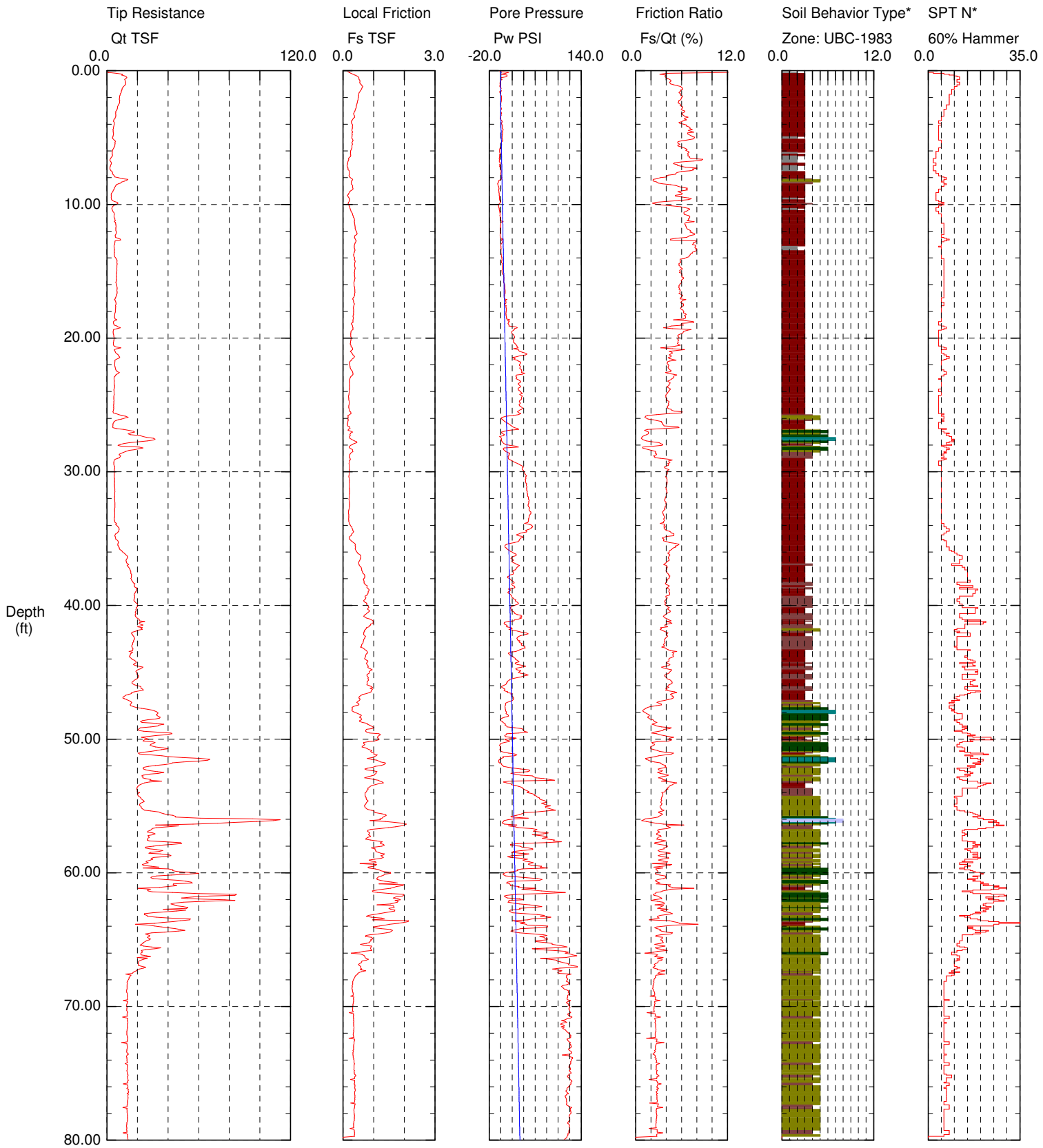
Ground water measured at 3 ft

*Soil behavior type and SPT based on data from UBC-1983

Southern Earth Sciences, Inc.

Operator: TTC
Sounding: CPT-02 ELEV. 6.10 ft
Cone Used: DDG0899

CPT Date/Time: 9/12/2007 4:58:34 PM
Location: LAKE MAUREPAS
Job Number: B07-163



Maximum Depth = 80.05 feet

Depth Increment = 0.00 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

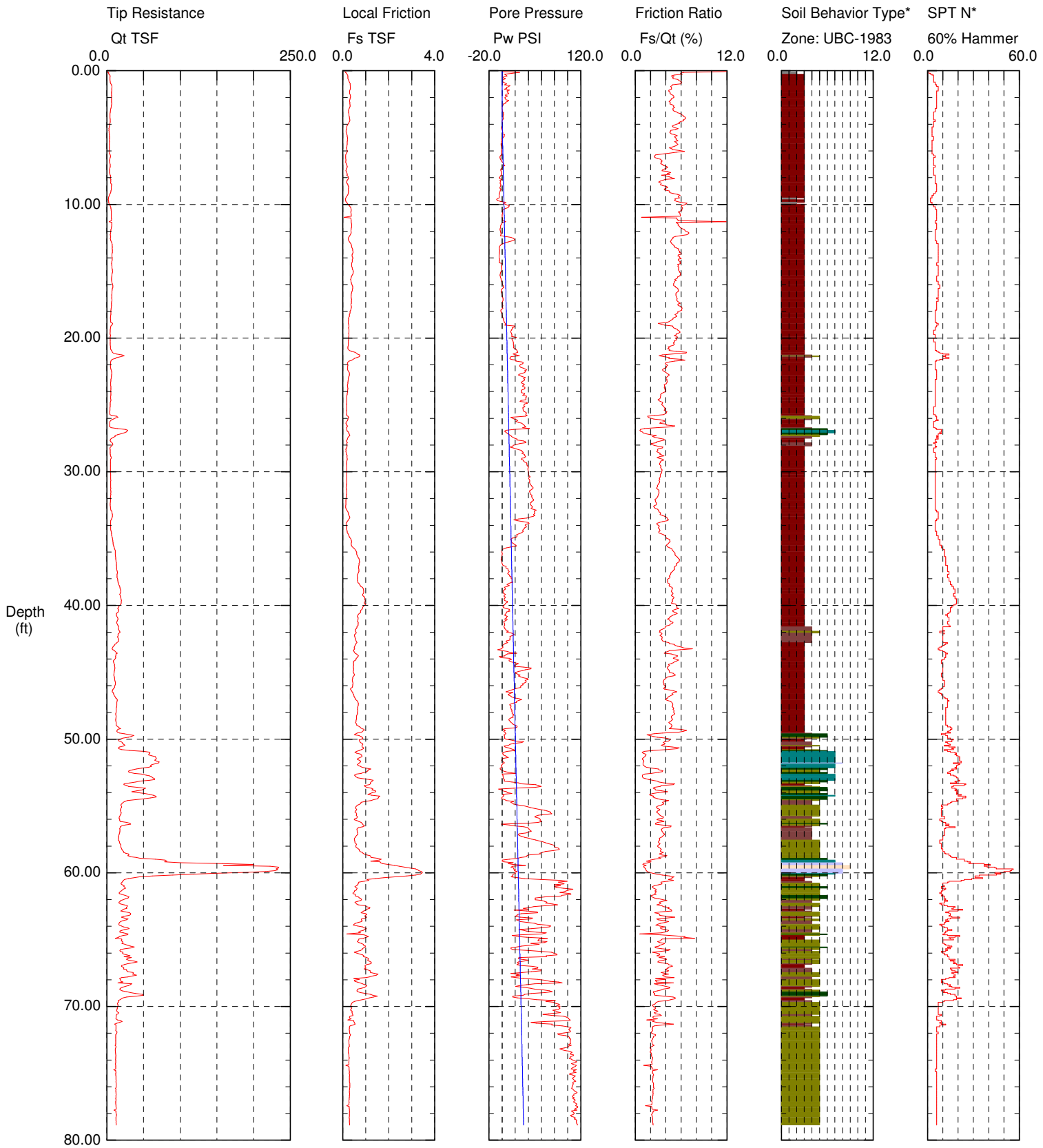
Ground water measured at 3 ft

*Soil behavior type and SPT based on data from UBC-1983

Southern Earth Sciences, Inc.

Operator: TTC
Sounding: CPT-03 ELEV. 6.00 ft
Cone Used: DDG0899

CPT Date/Time: 9/14/2007 10:43:49 AM
Location: LAKE MAUREPAS
Job Number: B07-163



Maximum Depth = 78.87 feet

Depth Increment = 0.00 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

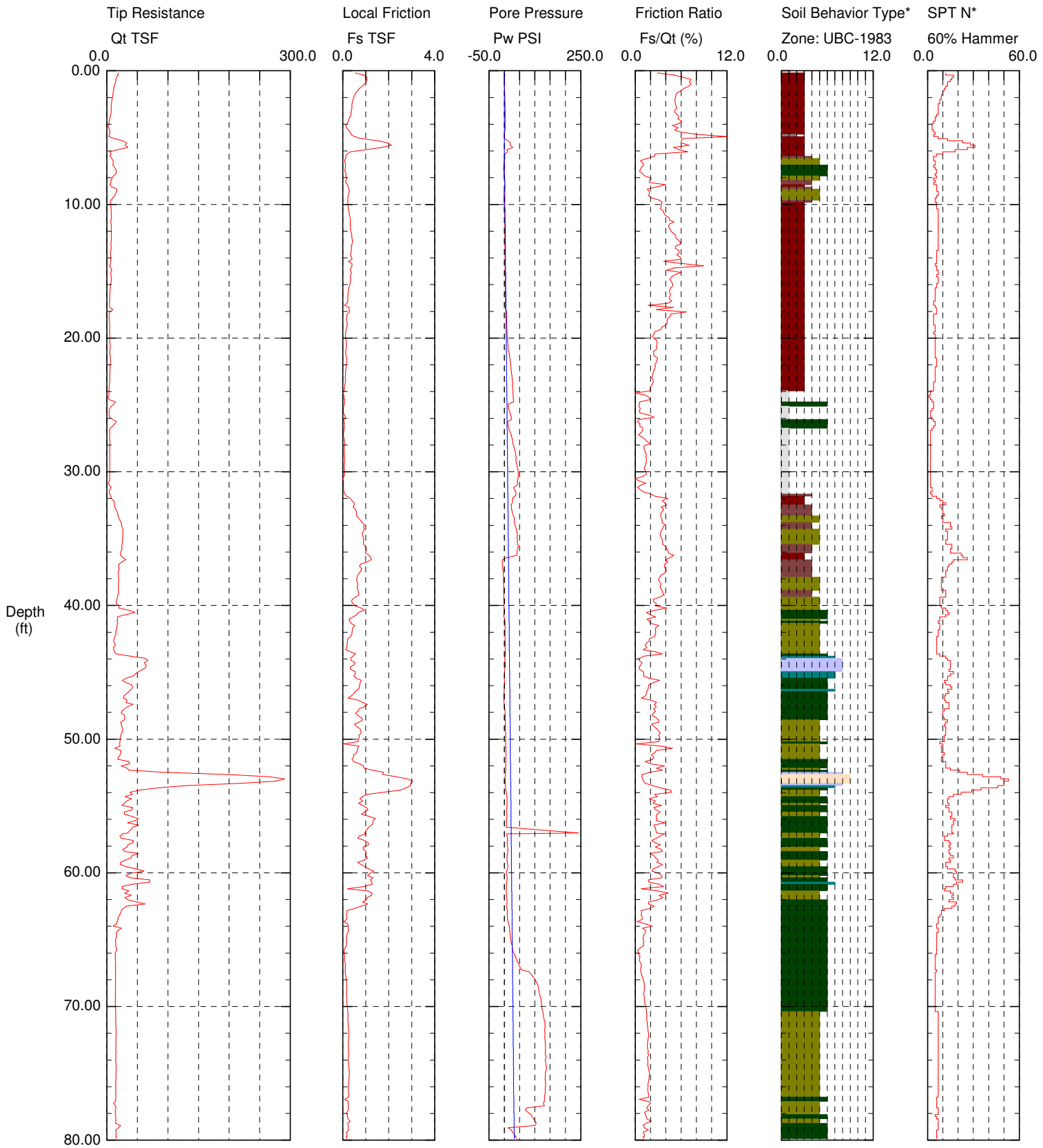
Ground water measured at 3 ft

*Soil behavior type and SPT based on data from UBC-1983

Southern Earth Sciences, Inc

Operator: Mike Wright
Sounding: CPT-04 ELEV. 5.00 ft
Cone Used: DSG0780

CPT Date/Time: 8/16/2007 3:37:40 PM
Location: DNR Maurepas Diversion
Job Number: B07-163



Maximum Depth = 80.05 feet

Depth Increment = 0.00 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

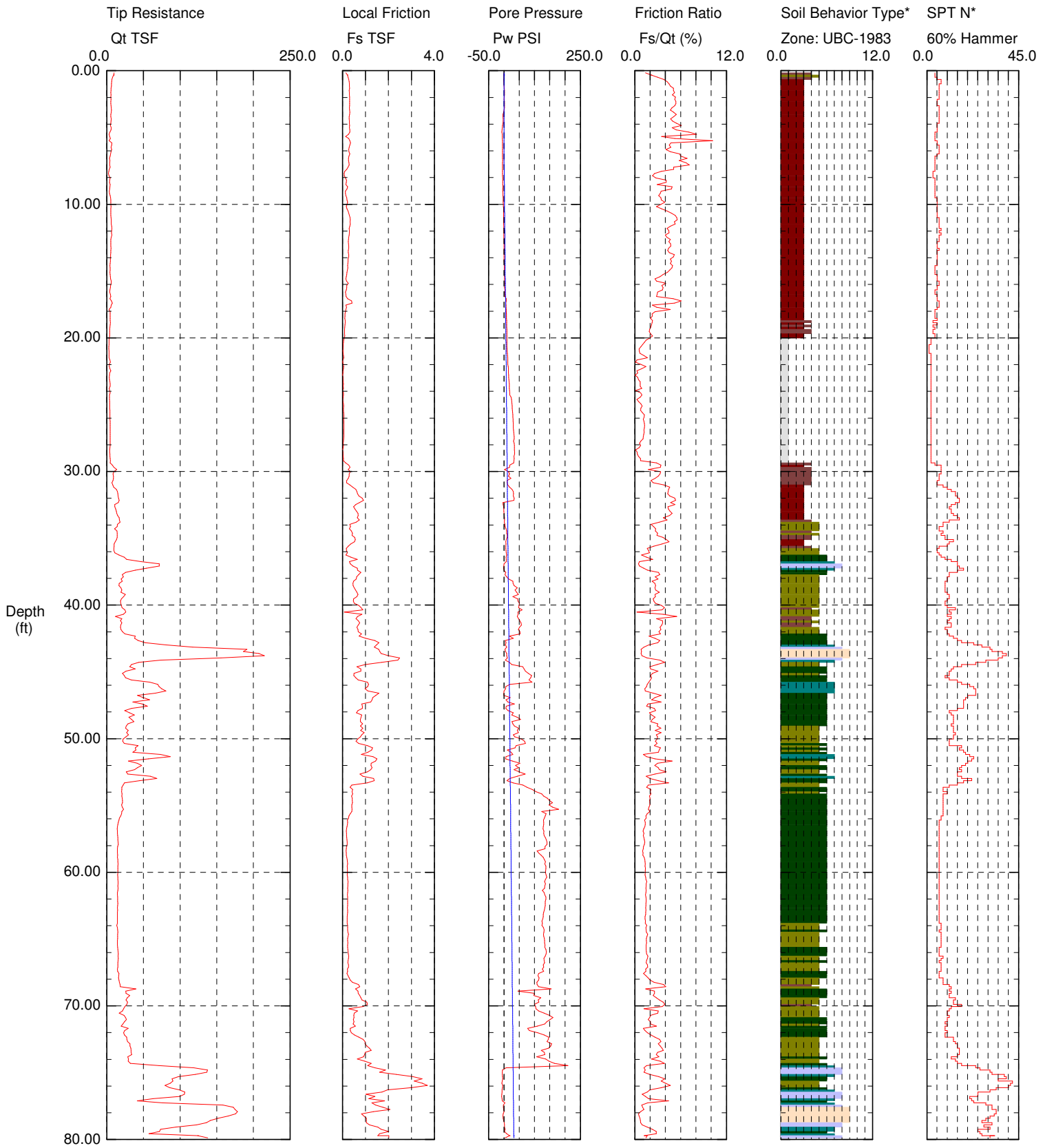
Ground water measured at 5.0'

*Soil behavior type and SPT based on data from UBC-1983

Southern Earth Sciences, Inc

Operator: Mike Wright
Sounding: CPT-05 ELEV. 6.30 ft
Cone Used: DSG0780

CPT Date/Time: 8/17/2007 7:55:26 AM
Location: DNR Maurepas Diversion
Job Number: B07-163



Maximum Depth = 80.05 feet

Depth Increment = 0.00 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

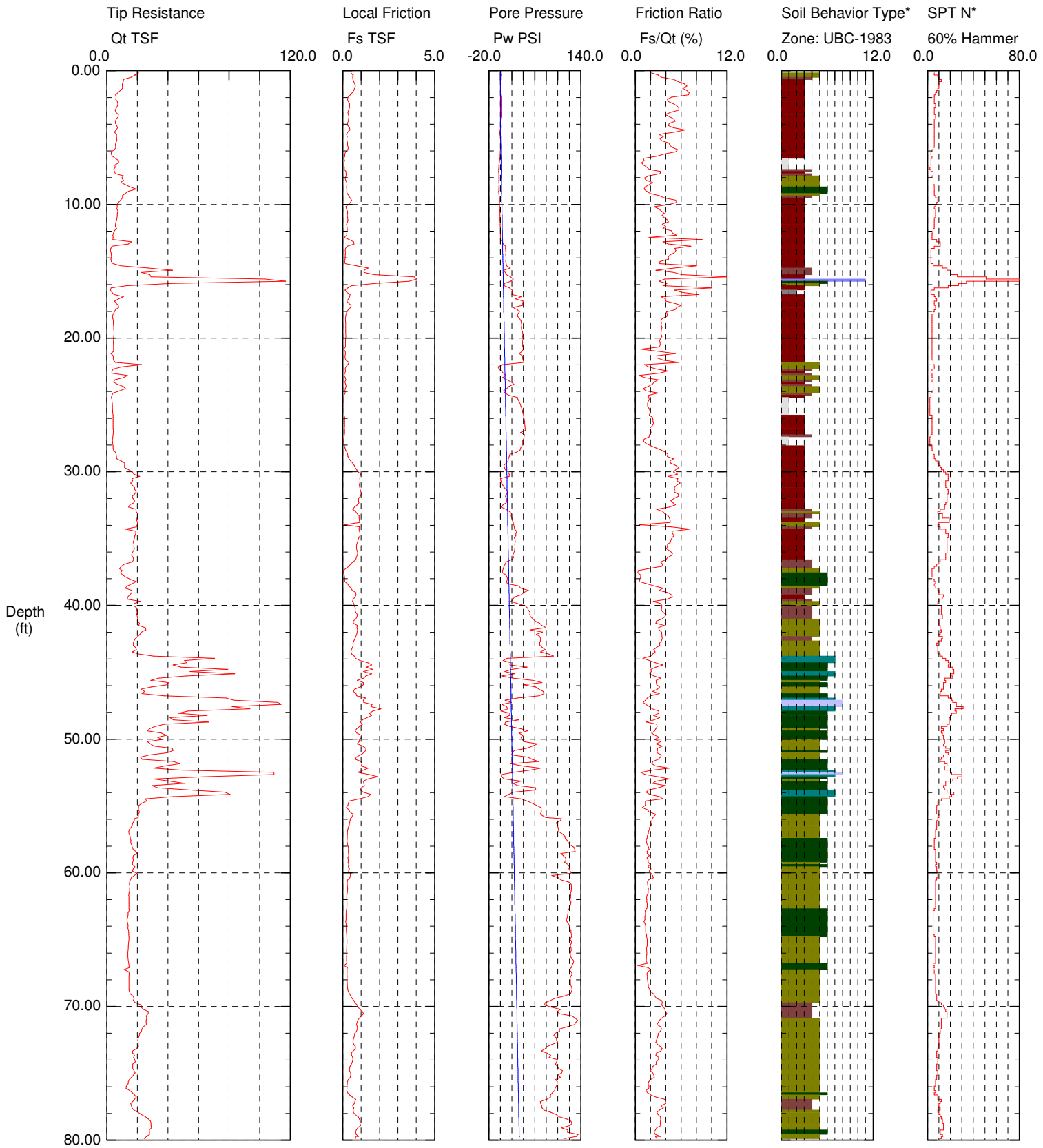
Ground water measured at 5.4'

*Soil behavior type and SPT based on data from UBC-1983

Southern Earth Sciences, Inc

Operator: Mike Wright
Sounding: CPT-06 ELEV. 4.50 ft
Cone Used: DSG0780

CPT Date/Time: 8/17/2007 8:52:37 AM
Location: DNR Maurepas Diversion
Job Number: B07-163



Maximum Depth = 80.05 feet

Depth Increment = 0.00 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

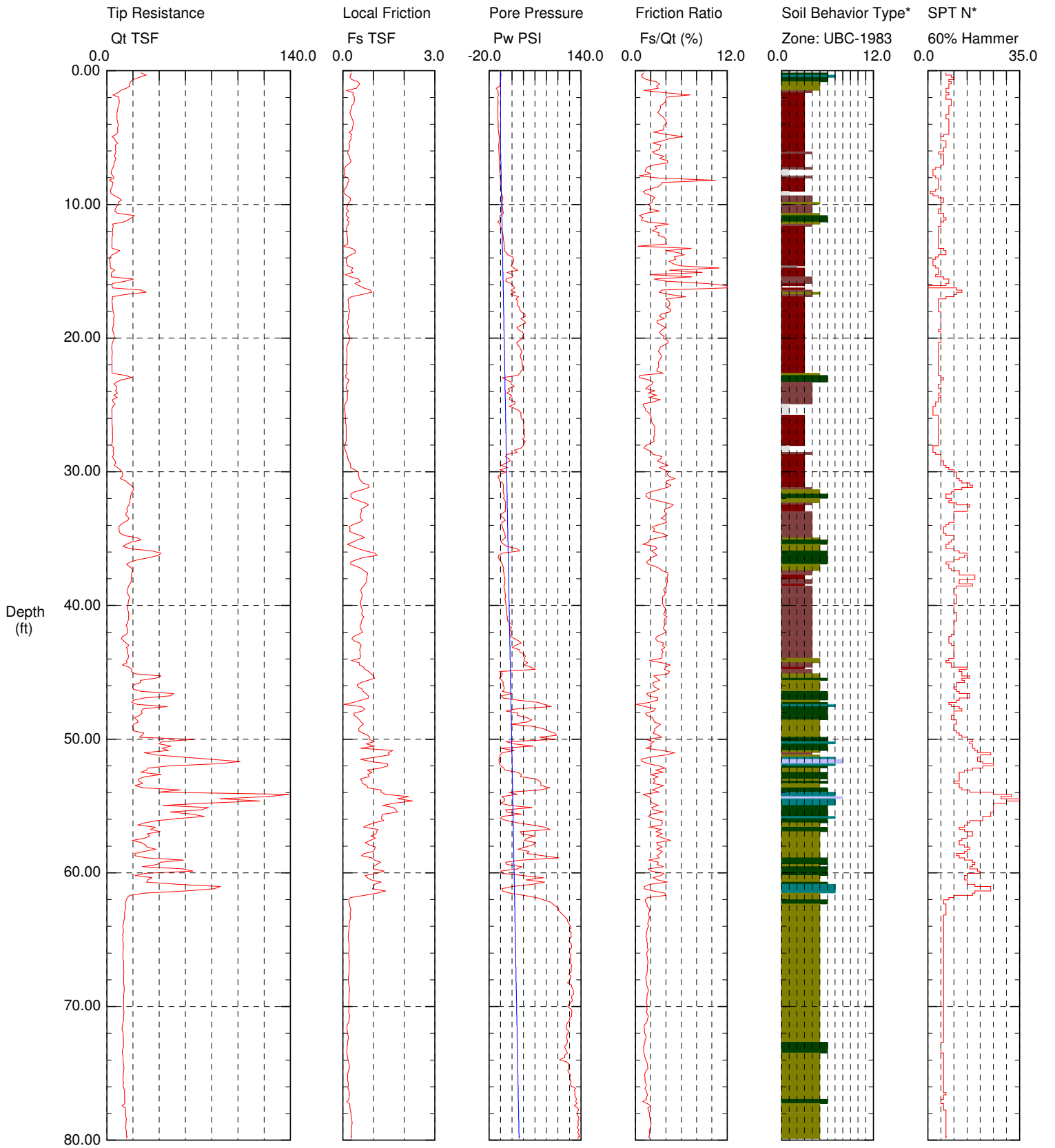
Sounding collapsed at 4.4'

*Soil behavior type and SPT based on data from UBC-1983

Southern Earth Sciences, Inc

Operator: Mike Wright
Sounding: CPT-07 ELEV. 5.10 ft
Cone Used: DSG0780

CPT Date/Time: 8/16/2007 9:54:21 AM
Location: DNR Maurepas Diversion
Job Number: B07-163



Maximum Depth = 80.05 feet

Depth Increment = 0.00 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

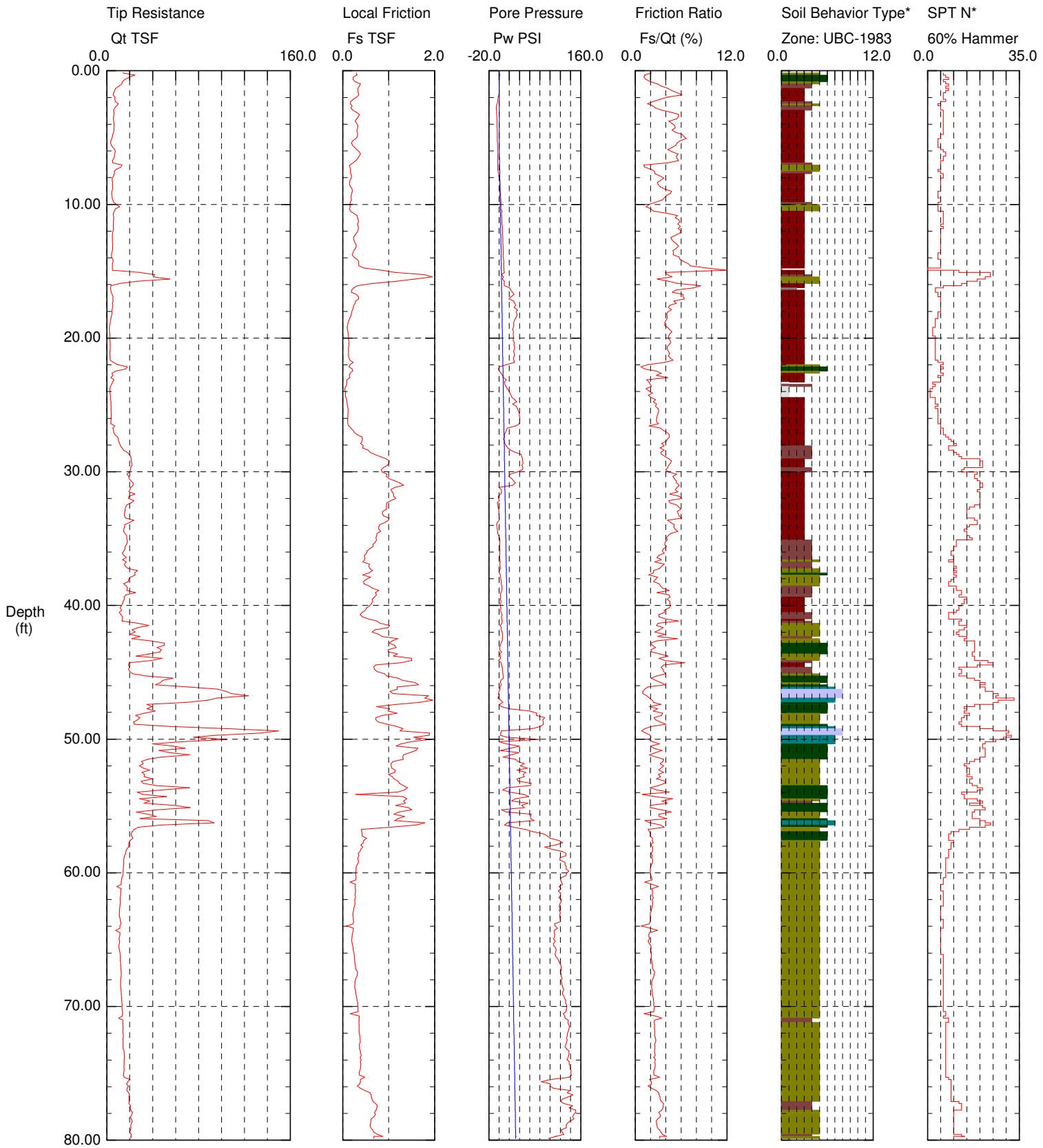
Ground water measured at 5.7'

*Soil behavior type and SPT based on data from UBC-1983

Southern Earth Sciences, Inc

Operator: Mike Wright
Sounding: CPT-08 ELEV. 4.40 ft
Cone Used: DSG0780

CPT Date/Time: 8/16/2007 8:52:55 AM
Location: DNR Maurepas Diversion
Job Number: B07-163



Maximum Depth = 80.05 feet

Depth Increment = 0.00 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

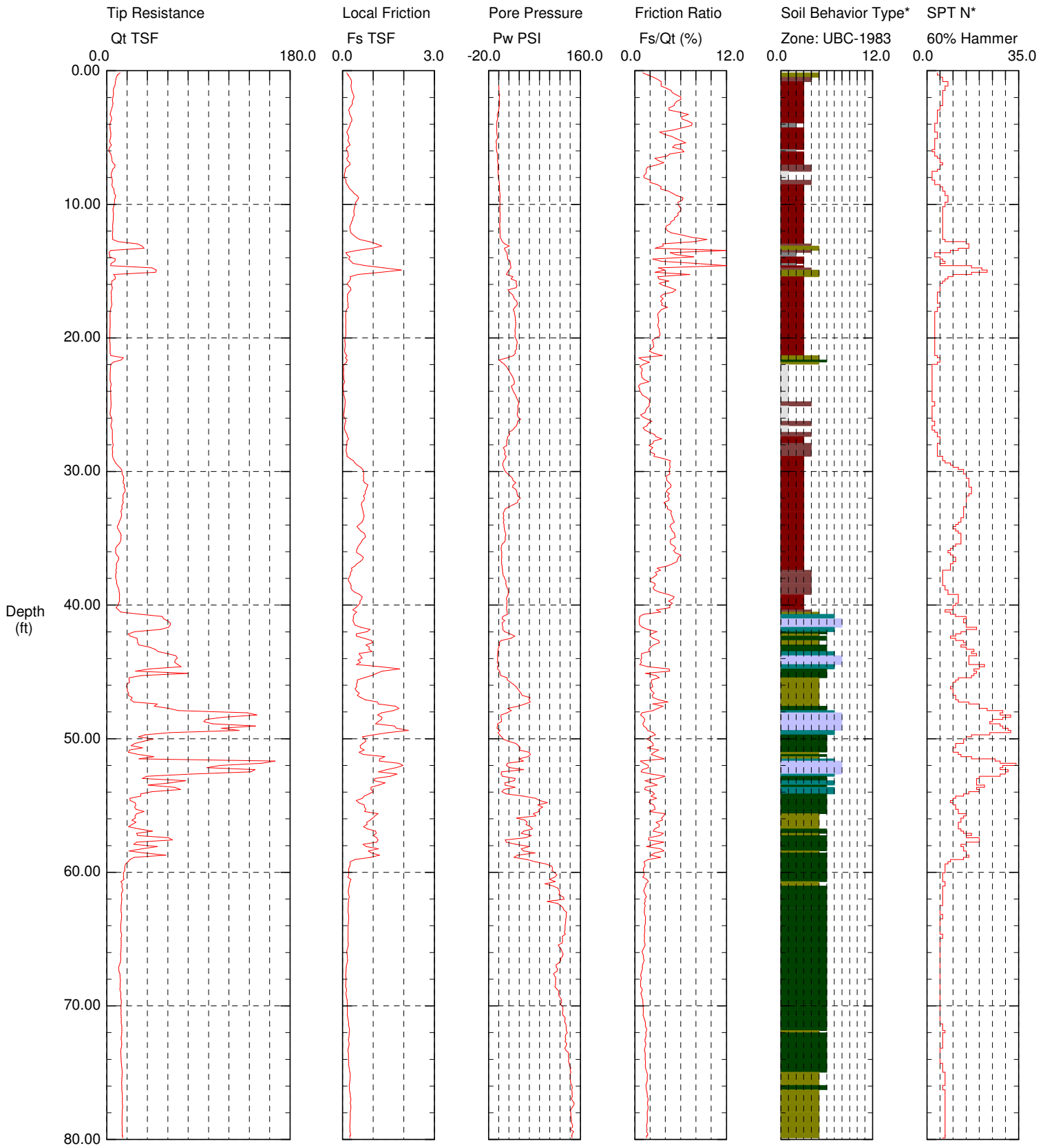
Ground water measured at 5.2'

*Soil behavior type and SPT based on data from UBC-1983

Southern Earth Sciences, Inc

Operator: Mike Wright
Sounding: CPT-09 ELEV. 3.40 ft
Cone Used: DSG0780

CPT Date/Time: 8/16/2007 7:34:08 AM
Location: DNR Maurepas Diversion
Job Number: B07-163



Maximum Depth = 80.05 feet

Depth Increment = 0.00 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

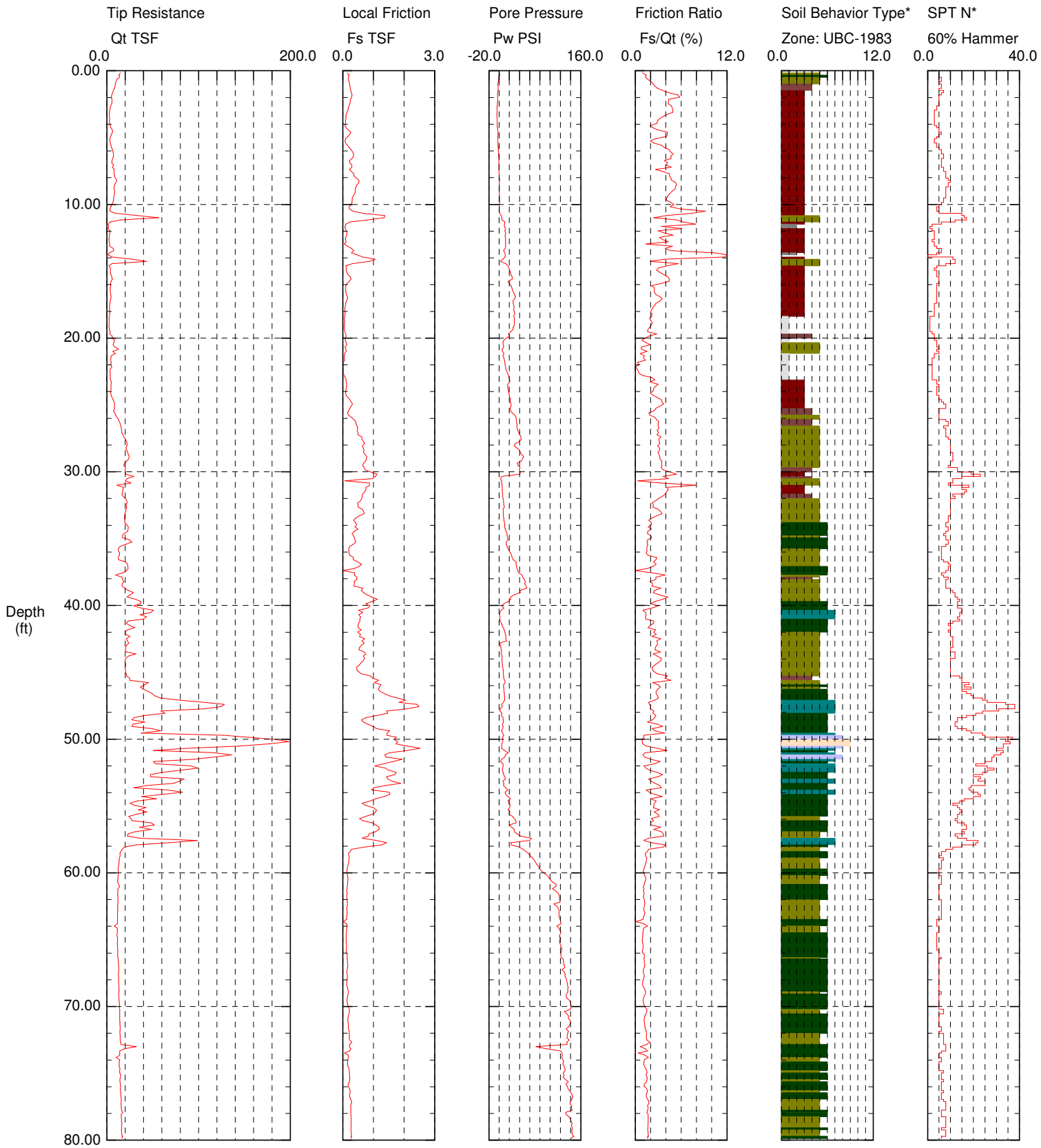
Ground water not measured due to collapsed hole

*Soil behavior type and SPT based on data from UBC-1983

Southern Earth Sciences, Inc

Operator: Mike Wright
Sounding: CPT-10 ELEV. 2.40 ft
Cone Used: DSG0780

CPT Date/Time: 8/16/2007 1:39:43 PM
Location: DNR Maurepas Diversion
Job Number: B07-163



Maximum Depth = 80.05 feet

Depth Increment = 0.00 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

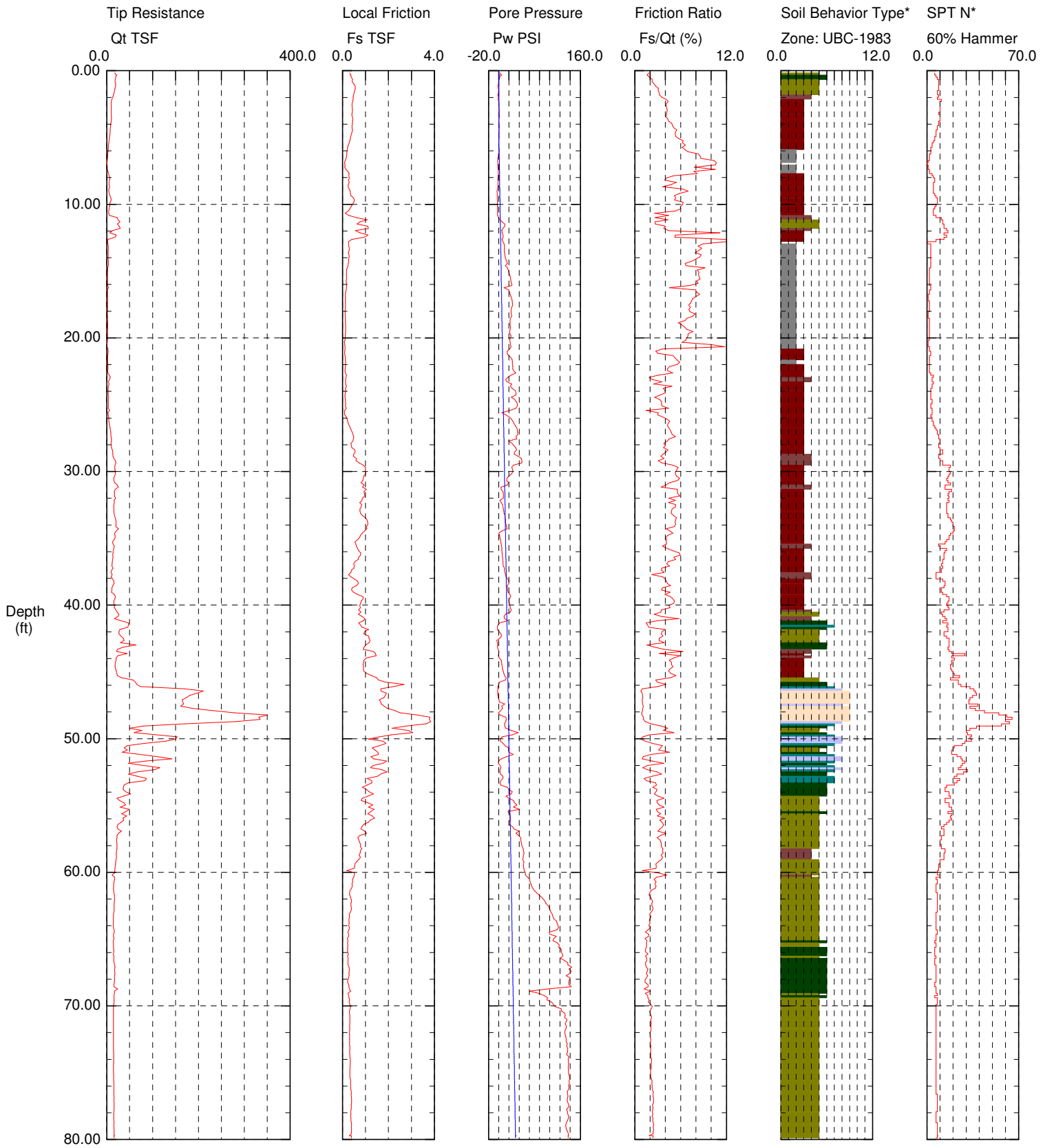
Ground water not measured due to collapsed hole

*Soil behavior type and SPT based on data from UBC-1983

Southern Earth Sciences, Inc

Operator: Mike Wright
Sounding: CPT-11 ELEV. 3.50 ft
Cone Used: DSG0780

CPT Date/Time: 8/21/2007 8:21:25 AM
Location: DNR Maurepas Diversion
Job Number: B07-163



Maximum Depth = 80.05 feet

Depth Increment = 0.00 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

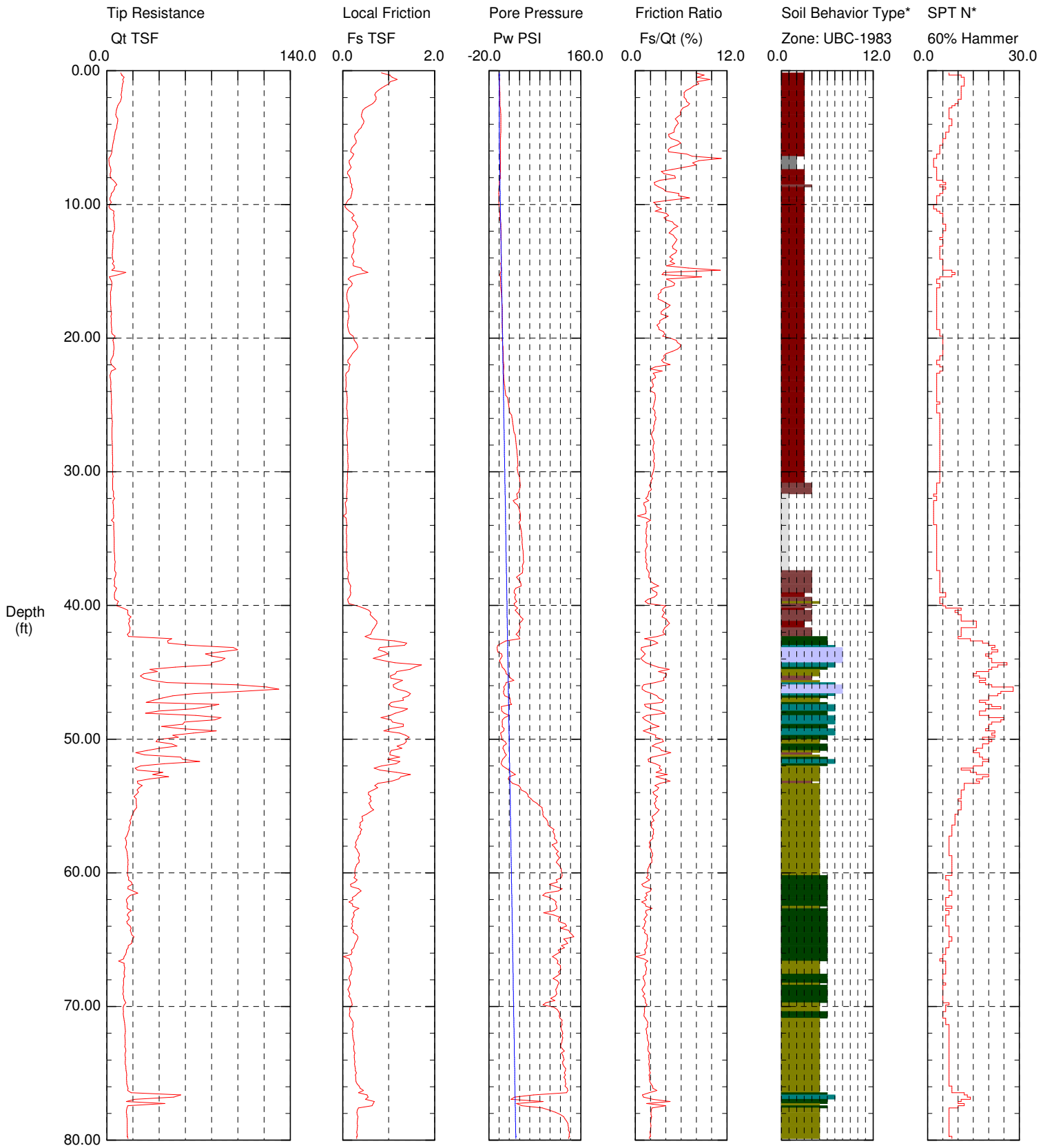
Ground water measured at 4.6'

*Soil behavior type and SPT based on data from UBC-1983

Southern Earth Sciences, Inc

Operator: Mike Wright
Sounding: CPT-12 ELEV. 4.30 ft
Cone Used: DSG0780

CPT Date/Time: 8/21/2007 9:10:11 AM
Location: DNR Maurepas Diversion
Job Number: B07-163



Maximum Depth = 80.05 feet

Depth Increment = 0.00 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

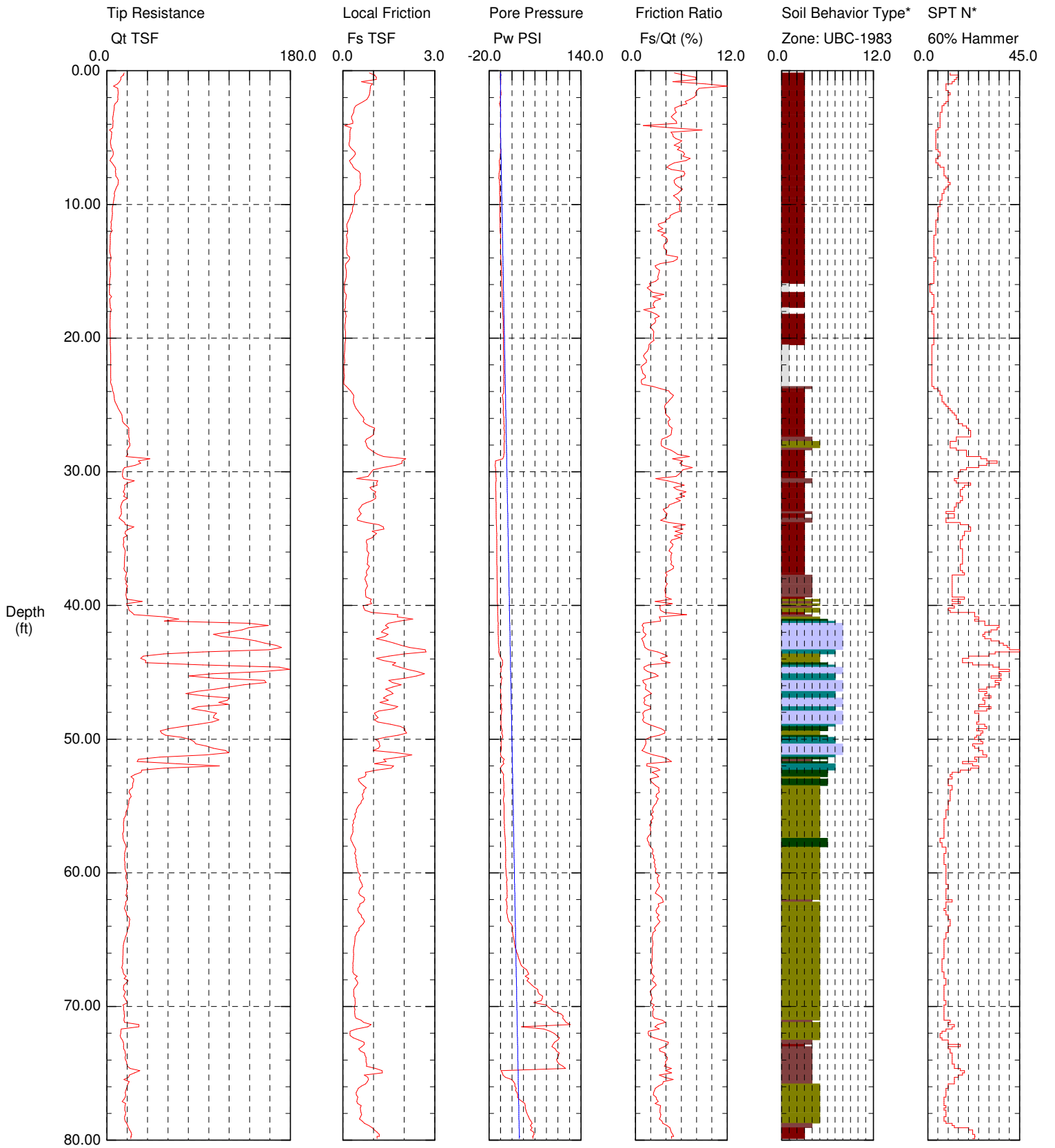
Ground water measured at 4.8'

*Soil behavior type and SPT based on data from UBC-1983

Southern Earth Sciences, Inc

Operator: Mike Wright
Sounding: CPT-13 ELEV. 3.40 ft
Cone Used: DSG0780

CPT Date/Time: 8/21/2007 3:39:55 PM
Location: DNR Maurepas Diversion
Job Number: B07-163



Maximum Depth = 80.05 feet

Depth Increment = 0.00 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

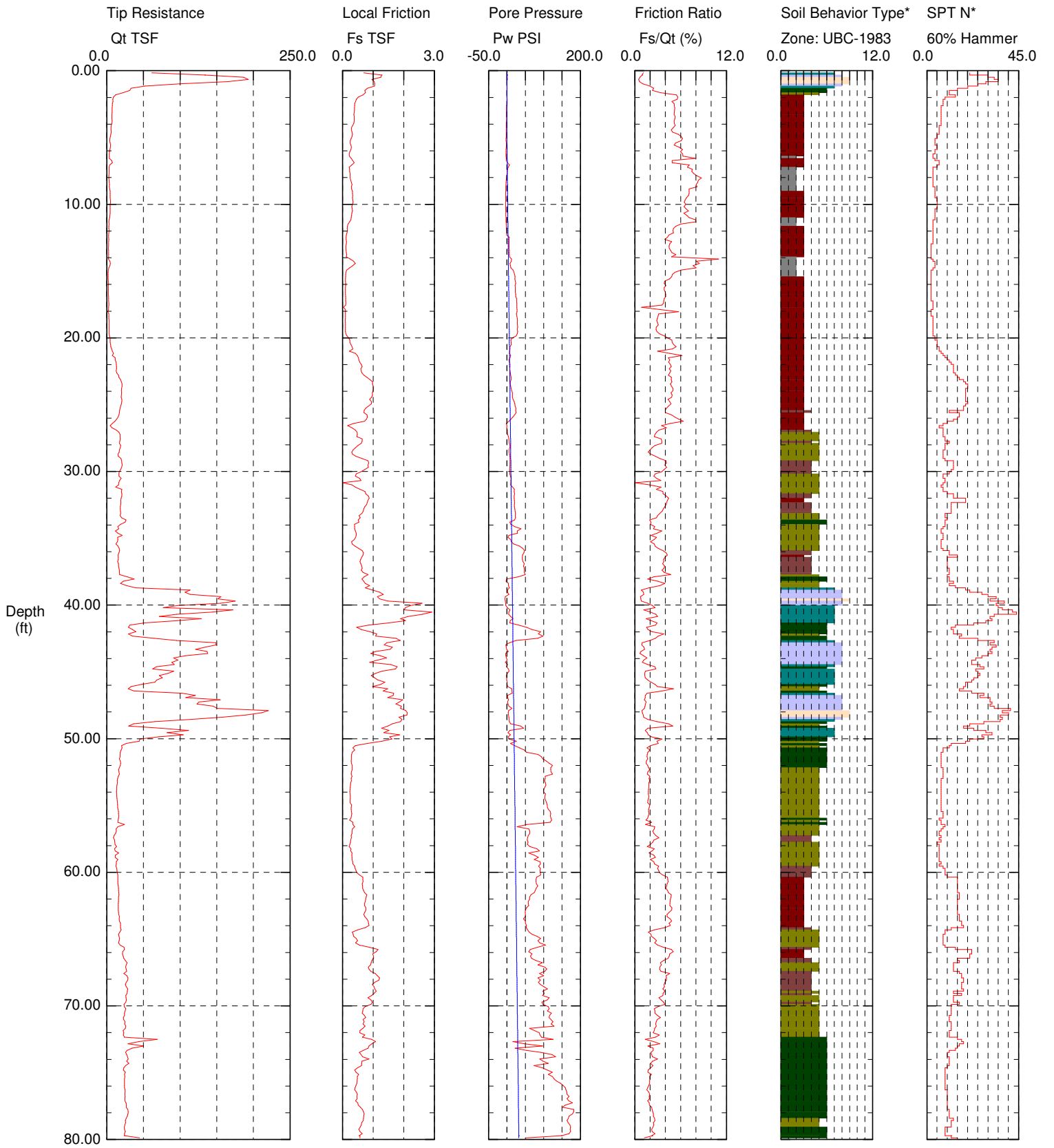
Ground water measured at 4.6'

*Soil behavior type and SPT based on data from UBC-1983

Southern Earth Sciences, Inc

Operator: Mike Wright
Sounding: CPT-14 ELEV. 3.10 ft
Cone Used: DSG0780

CPT Date/Time: 8/21/2007 12:32:22 PM
Location: DNR Maurepas Diversion
Job Number: B07-163



Maximum Depth = 80.05 feet

Depth Increment = 0.00 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

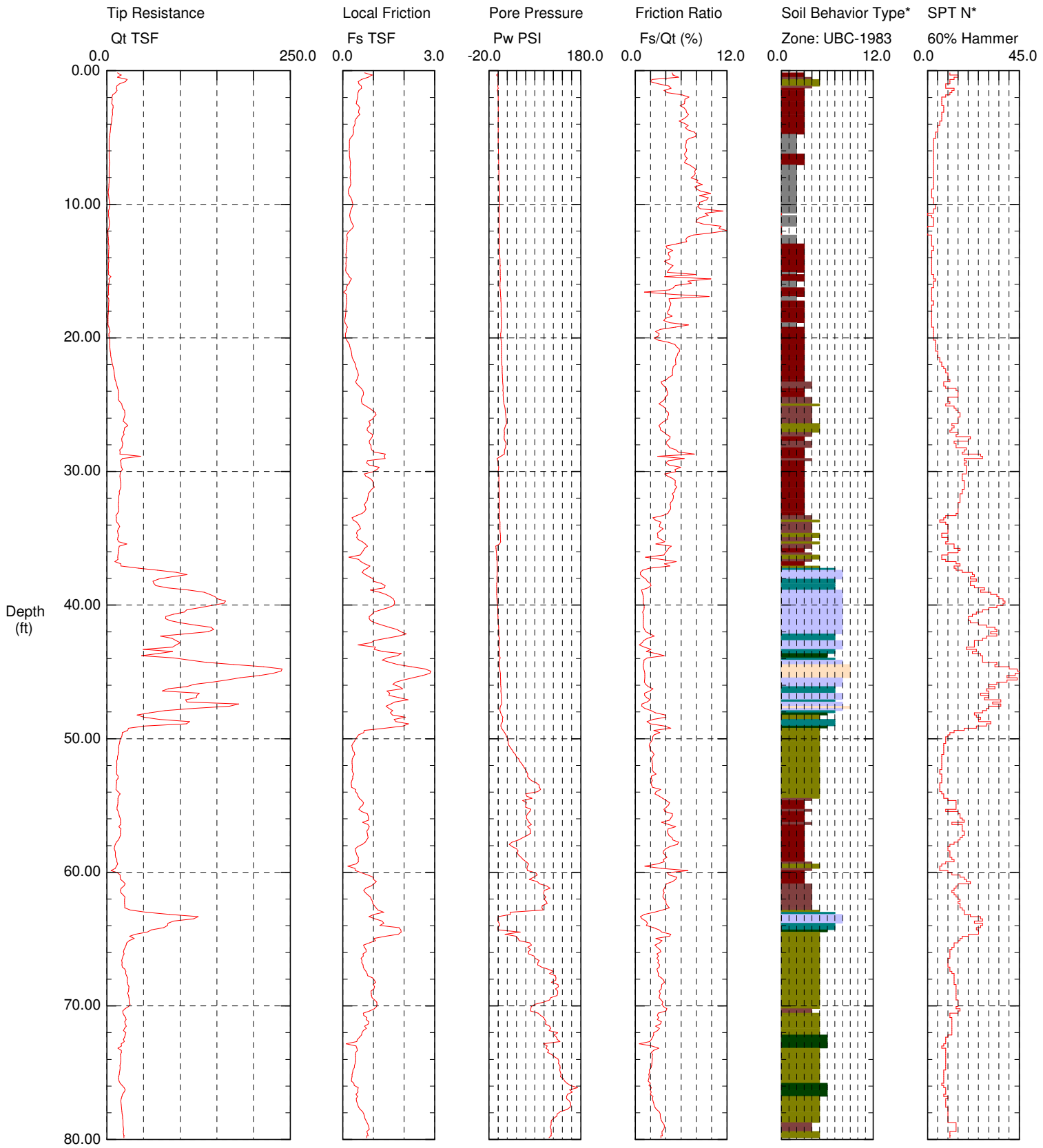
Ground water measured at 5.4'

*Soil behavior type and SPT based on data from UBC-1983

Southern Earth Sciences, Inc

Operator: Mike Wright
Sounding: CPT-15 ELEV. 2.10 ft
Cone Used: DSG0780

CPT Date/Time: 8/21/2007 2:10:50 PM
Location: DNR Maurepas Diversion
Job Number: B07-163



Maximum Depth = 80.05 feet

Depth Increment = 0.00 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

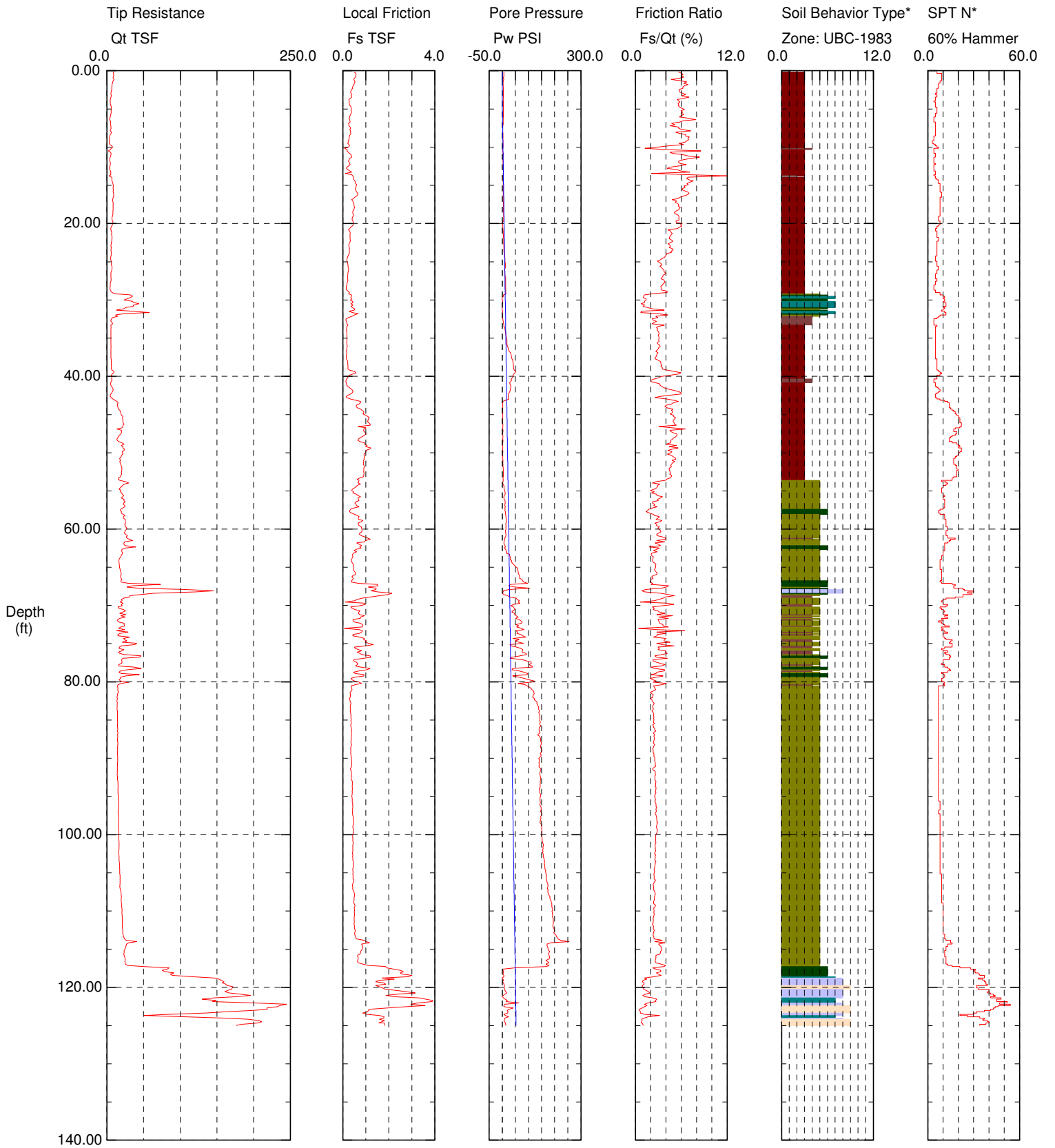
Sounding collapsed at surface.

*Soil behavior type and SPT based on data from UBC-1983

Southern Earth Sciences, Inc

Operator: Mike Wright
Sounding: CPT-16 ELEV. 8.01 ft
Cone Used: DSG0780

CPT Date/Time: 9/14/2007 1:52:25 PM
Location: Lake Maurepas
Job Number: B07-163



Maximum Depth = 125.00 feet

Depth Increment = 0.00 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

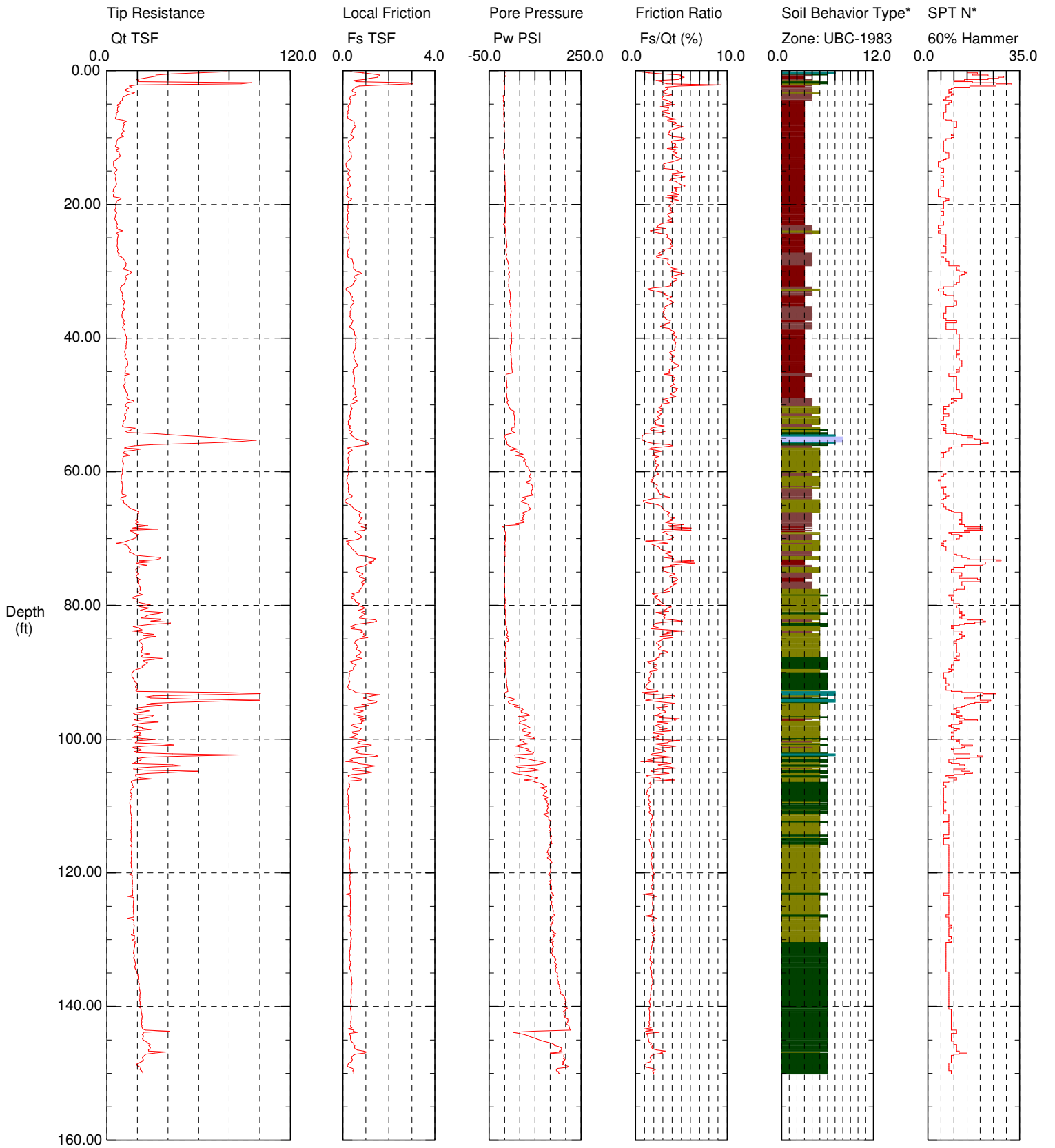
Ground water measured at 3.3'

*Soil behavior type and SPT based on data from UBC-1983

Southern Earth Sciences, Inc

Operator: Mike Wright
Sounding: CPT_17 ELEV. 31.00 ft
Cone Used: DSG0780

CPT Date/Time: 9/14/2007 12:16:19 PM
Location: Lake Maurepas
Job Number: B07-163



Maximum Depth = 150.10 feet

Depth Increment = 0.00 feet

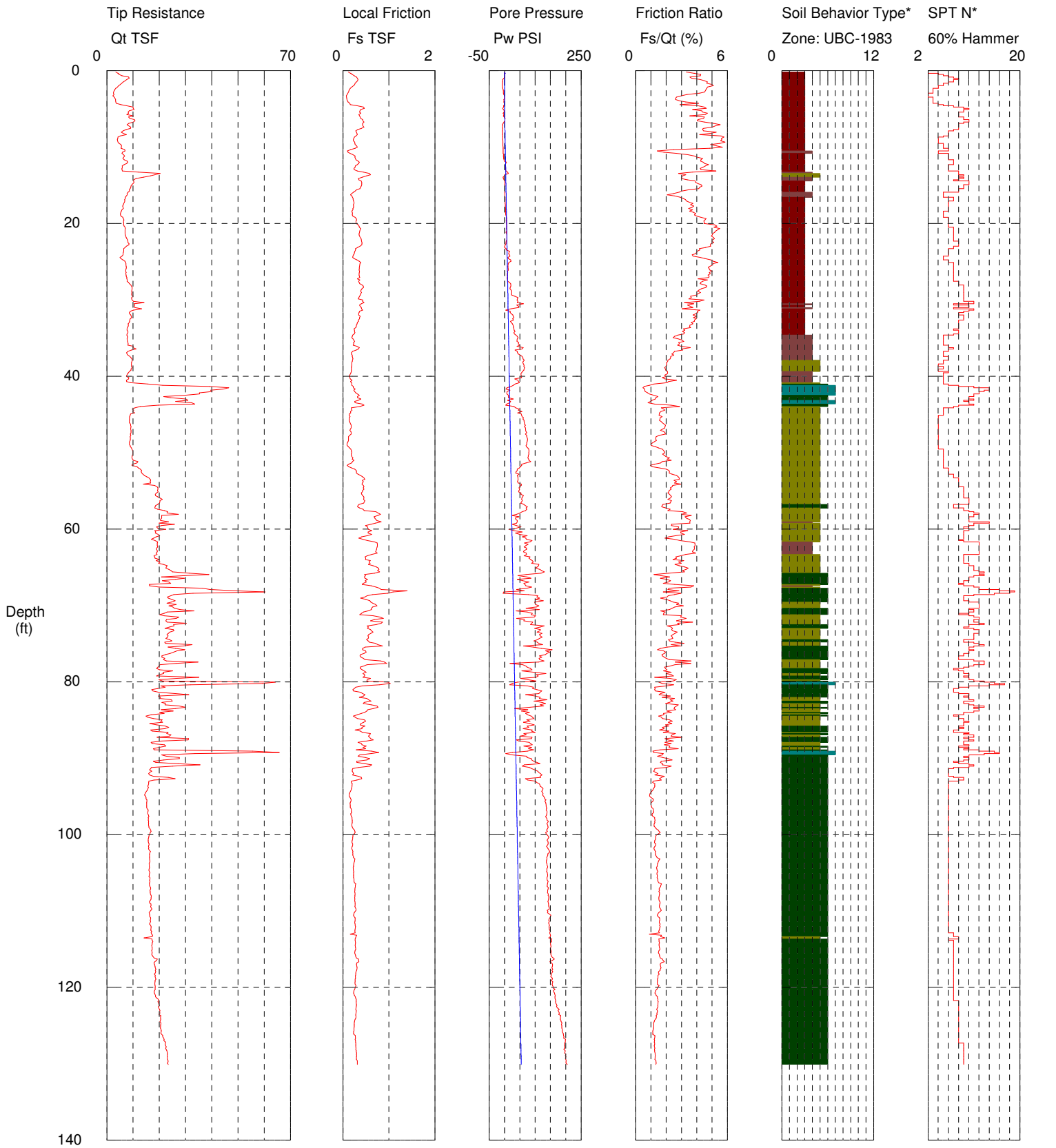
1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

Sounding collapsed at 11.7'

URS Corporation

Operator: Mike Wright
Sounding: CPT-1A
Cone Used: DTG1137
Elevation: 18.40 feet

CPT Date/Time: 7/14/2011 1:53:39 PM
Location: Lake Maurepas
Job Number: B11-046



Maximum Depth = 130.09 feet
N565075.54 E3500012.66

Depth Increment = 0.164 feet

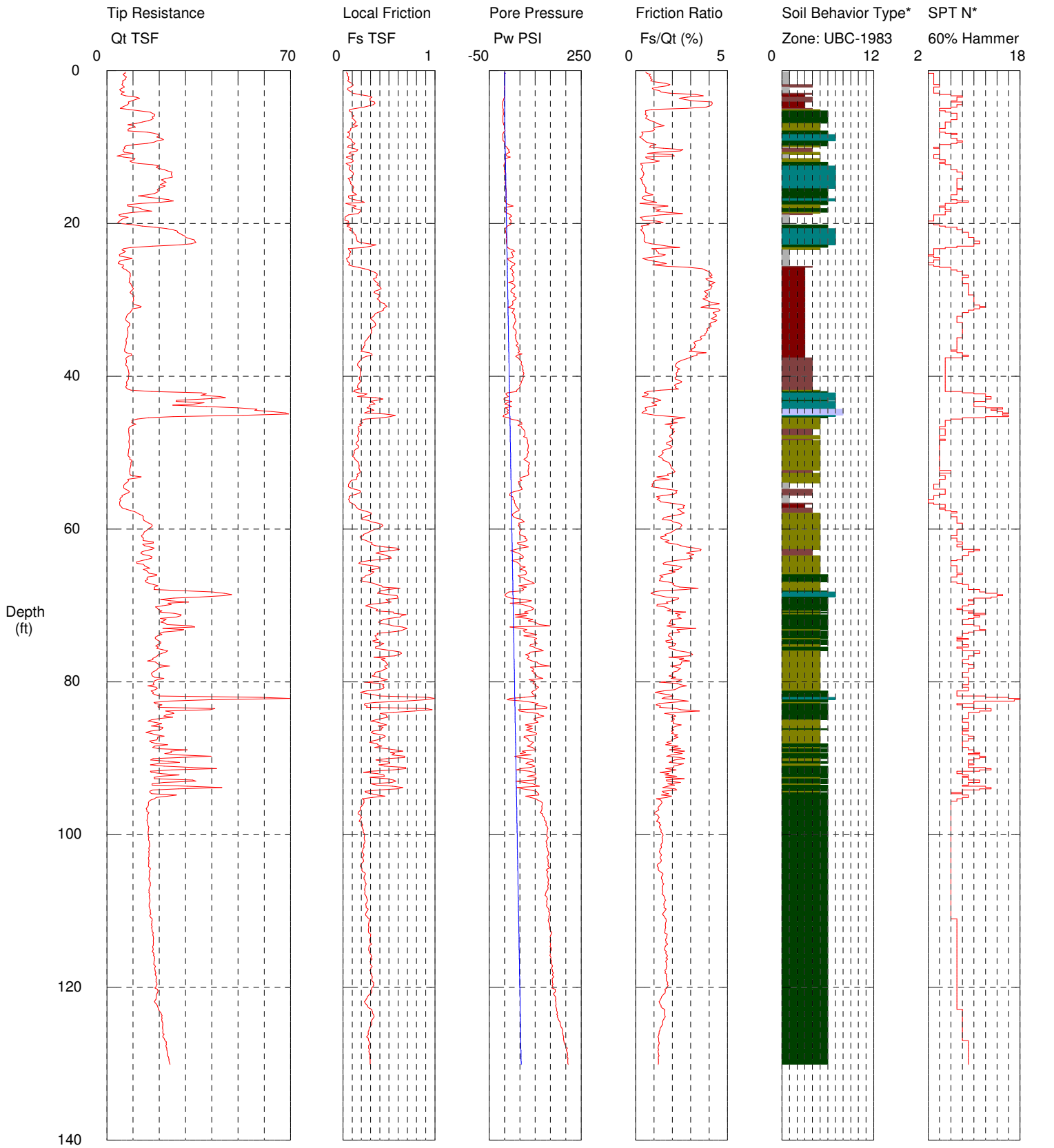
1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*Soil behavior type and SPT based on data from UBC-1983

URS CORPORATION

Operator: Mike Wright
Sounding: CPT-2A
Cone Used: DTG1137
Elevation: 18.10 feet

CPT Date/Time: 7/14/2011 3:16:35 PM
Location: Lake Maurepas
Job Number: B11-046



Maximum Depth = 130.09 feet
N564963.68 E3499890.30

Depth Increment = 0.164 feet

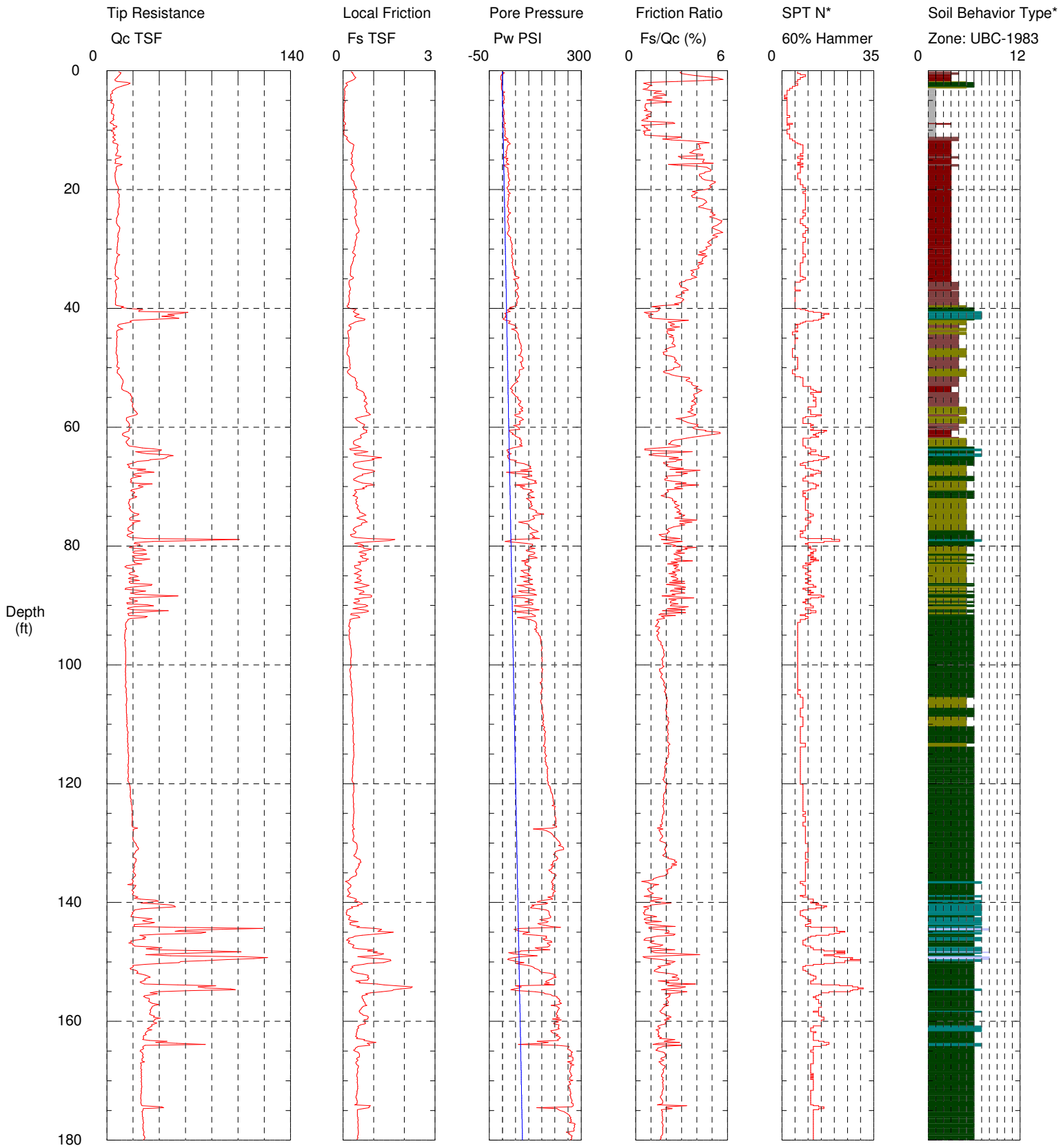
1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*Soil behavior type and SPT based on data from UBC-1983

URS Corporation

Operator: Mike Wright (SESI)
Sounding: CPT-1B
Cone Used: DDG1182
Elevation: 18.00 feet

CPT Date/Time: 4/10/2013 7:59:09 AM
Location: Lake Maurepas
Job Number: 10001863



Maximum Depth = 180.28 feet
N565122.72 E3499862.98

Depth Increment = 0.164 feet

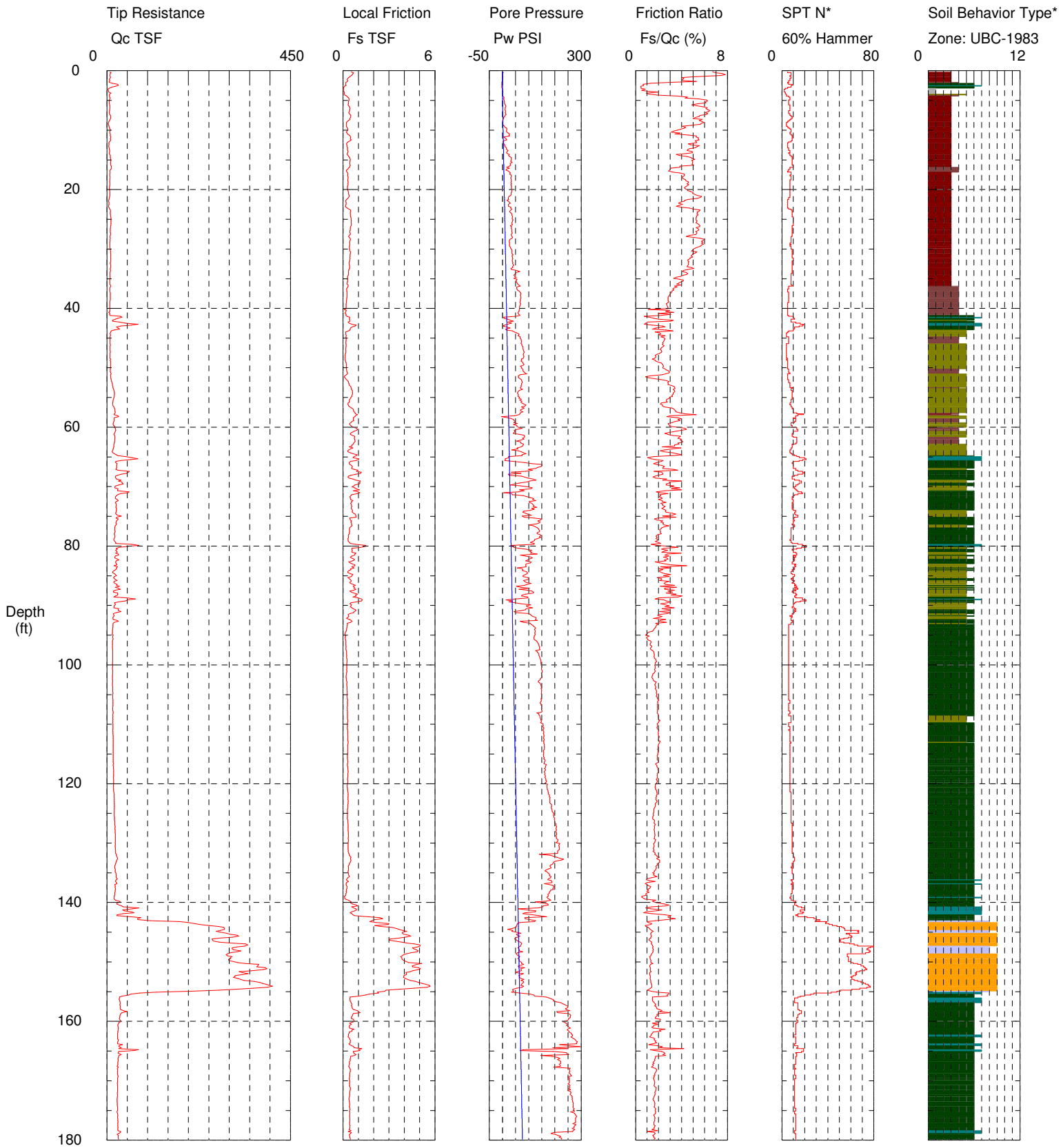
1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*Soil behavior type and SPT based on data from UBC-1983

URS Corporation

Operator: Mike Wright (SESI)
Sounding: CPT-2B
Cone Used: DDG1182
Elevation: 20.17 feet

CPT Date/Time: 4/9/2013 1:05:23 PM
Location: Lake Maurepas
Job Number: 10001863



Maximum Depth = 181.66 feet
N565021.83 E3500138.47

Depth Increment = 0.164 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*Soil behavior type and SPT based on data from UBC-1983