



GEOTECHNICAL BORING LOG

Prepared By SPX Date 5-30-08Checked By RM Date 6-2-08

SHEET 1 OF 2

BECHTEL PROJECT NO.: 25409		MACTEC PROJECT NO.: 6468-07-1950		COUNTY: Miami-Dade		GEOLOGIST: J. Liles							
SITE DESCRIPTION: Turkey Point COL		DRILL MACHINE: CME-550 (Miller)		DRILLER: R. White/ J. Dugger		GROUND WATER (ft)							
BORING NO.: B-714		DRILL METHOD: Mud Rotary/ Core		SAMPLE METHODS: SPT/Core		0 HR. NA							
GROUND ELEV.: -1.0 ft (NAVD88)		NORTHING: 397,259 US ft (NAD83/90)		EASTING: 876,021 US ft (NAD83/90)		24 HR. NA							
TOTAL DEPTH: 125.6 ft		BORING DIAMETER: 4" to 27.7", 3" to 125.6'		CASING DEPTH: 4" to 27.7", 3" to 115.0'		HAMMER (ID): 140 lb. Auto (M06)							
DATE STARTED: 4/16/08		COMPLETED: 4/17/08		CORE SIZE: HQ3		BITS USED: 2 7/8" Roller Cone							
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100			
-1.0					Ground Surface								
-1.0	0.0	WOH	WOH	WOH									
-3.7	2.7												
-6.2	5.2	WOH	5	5									
-8.7	7.7												
-10.9	9.9	20	16	11									
-13.4	12.4	11	21	3									
-16.1	15.1	4	8	7									
		14	20	14									
		9	18	31									
-22.8	21.8												
		8	6	6									
-27.9	26.9												
-28.7	27.7	44	50/0.3										
-32.0	31.0												
-37.0	36.0												
-42.0	41.0												
-47.0	46.0												
-52.0	51.0												
-57.0	56.0												
-62.0	61.0												
-67.0	66.0												
-72.0	71.0												
-73.5	72.5	6	5	7									

SEE LEGEND FOR ROCK HARDNESS CRITERIA BASED ON SPT DATA

94/0.8

714-1

714-2A&B

714-3

714-4

714-5

714-6

714-7

714-8

714-9

RUN-1

RUN-2

RUN-3

RUN-4

RUN-5

RUN-6

RUN-7

RUN-8

RUN-9

714-10

RUN-10

MUCK, olive brown (2.5Y4/3), very soft, wet, strong HCl reaction, mostly organic

LIMESTONE boundstone, light gray (2.5Y7/2), very soft, wet, some fine grained sand, strong HCl reaction, oolitic (Miami Formation)

5.2ft: white (2.5Y8/1), soft

7.7ft: trace sand

9.9ft: very soft

12.4ft: medium hard

15.1ft: moderately hard

21.8ft: very soft

LIMESTONE, boundstone, white (2.5Y8/1), hard, wet, strong HCl reaction (Upper Fort Thompson Formation)

27.7ft: Switch sampling method to coring

27.7ft: moderately hard, moderately indurated

31.0ft: moderately hard to hard, moderately indurated to indurated, trace vugs, coralline, recrystallized calcite

36.0ft: little vugs

41.0ft: medium hard to moderately hard, friable to moderately indurated, few vugs

46.0ft: white (2.5Y8/1) to 46.5ft then light gray (10YR7/1) to 47.7ft

LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, trace vugs, fossiliferous, trace recrystallized calcite, strong HCl reaction (Lower Fort Thompson Formation)

51.0ft: moderately hard to hard

56.0ft: medium hard to moderately hard, friable to moderately indurated

61.0ft: medium hard to hard, friable to indurated, trace sand

66.0ft: soft to medium hard, friable to moderately indurated, little fine grained sand

71.0ft: Switch sampling method to SPT

71.0 to 71.5ft: POORLY GRADED SAND (SP), white (2.5Y8/1), medium dense, fine grained,

TURKEY POINT COL BORE TURKEY POINT GPJ TURKEY POINT COL GDI: 5/30/08



SHEET 2 OF 2

BECHTEL PROJECT NO.: 25409			MACTEC PROJECT NO.: 6468-07-1950			COUNTY: Miami-Dade			GEOLOGIST: J. Liles				
SITE DESCRIPTION: Turkey Point COL			DRILL MACHINE: CME-550 (Miller)			DRILLER: R. White/ J. Dugger			GROUND WATER (ft)				
BORING NO.: B-714			DRILL METHOD: Mud Rotary/ Core			SAMPLE METHODS: SPT/Core			0 HR. NA				
GROUND ELEV.: -1.0 ft (NAVD88)			NORTHING: 397,259 US ft (NAD83/90)			EASTING: 876,021 US ft (NAD83/90)			24 HR. NA				
TOTAL DEPTH: 125.6 ft			BORING DIAMETER: 4" to 27.7", 3" to 125.6"			CASING DEPTH: 4" to 27.7", 3" to 115.0'			HAMMER (ID): 140 lb. Auto (M06)				
DATE STARTED: 4/16/08			COMPLETED: 4/17/08			CORE SIZE: HQ3			BITS USED: 2 7/8" Roller Cone				
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100	MOI		
-75.8					Continued from previous page								
-77.0	76.0												strong HCl reaction
													71.5ft: transition to limestone
													72.5ft: Switch sampling method to coring
													72.5ft: moderately hard, moderately indurated,
													trace fine sand
-82.0	81.0												LIMESTONE, boundstone, white (2.5Y8/1),
													hard, indurated, trace vugs, fossiliferous, trace
													recrystallized calcite, strong HCl reaction
													(Lower Fort Thompson Formation) (continued)
-87.0	86.0												76.0ft: few sand
													81.0ft: medium hard to moderately hard,
													friable to moderately indurated
													86.0ft: moderately hard to hard, moderately
-92.0	91.0												indurated to indurated, little vugs, few shell
													molds
													91.0ft: medium hard to moderately hard,
													friable to moderately indurated, sandy
-97.0	96.0												
													96.0ft: moderately hard, moderately indurated,
													little vugs
-102.0	101.0												
													101.0ft: mostly vugs, little to some shell molds
													and casts
-107.0	106.0												
													106.0ft: medium hard to moderately hard,
													friable to moderately indurated, mostly vugs,
													little shell molds and casts
-112.0	111.0												
													111.0ft: moderately hard, moderately
													indurated, trace vugs
													112.0 to 113.0ft: rod drop
-117.1	116.1	1	2	2									POORLY GRADED SAND (SP), light gray
													(2.5Y7/2), very loose, wet, fine grained sand,
													strong HCl reaction, trace limestone fragments
													(Tamiami Formation)
-125.1	124.1	1	4	4									
													124.1ft: loose
													Boring Terminated at Elevation -126.6 ft

TURKEY POINT COL BORE TURKEY POINT GPJ TURKEY POINT COL GDT 5/30/08



SHEET 1 OF 2

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BORING NO.: B-714				DRILL METHOD: Mud Rotary/ Core				SAMPLE METHODS: SPT/Core				0 HR. NA	
GROUND ELEV.: -1.0 ft (NAVD88)				NORTHING: 397,259 US ft (NAD83/90)				EASTING: 876,021		US ft (NAD83/90)		24 HR. NA	
TOTAL DEPTH: 125.6 ft				CASING DEPTH: 4" to 27.7', 3" to 115.0'						HAMMER (ID): 140 lb. Auto (M06)			
DATE STARTED: 4/16/08		COMPLETED: 4/17/08		CORE SIZE: HQ3		CORE BARREL TYPE: Triple Tube Wireline (Split inner liners)							
ELEV. (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC (ft) %		RQD (ft) %	SAMP. NO.	STRATA REC (ft) %		RQD (ft) %	L O G	DESCRIPTION AND REMARKS	
												Begin Coring @ 27.7 ft	
-28.7	27.7	3.3	1:40 1:31 1:39	(3.3) 100%	(2.7) 82%	RUN-1	(19.5) 98%	(11.2) 56%				LIMESTONE, boundstone, white (2.5Y8/1), hard, wet, strong HCl reaction (Upper Fort Thompson Formation) (continued)	
-32.0	31.0											27.7ft: moderately hard, moderately indurated	
		5.0	1:23 1:03 1:22 1:32 1:10	(4.9) 98%	(3.6) 72%	RUN-2						31.0ft: moderately hard to hard, moderately indurated to indurated, trace vugs, coralline, recrystallized calcite	
-37.0	36.0												
		5.0	1:15 1:12 0:57 1:01 1:12	(5.0) 100%	(0.9) 18%	RUN-3						36.0ft: little vugs	
-42.0	41.0												
		5.0	1:20 1:12 1:31 1:00 0:40	(4.6) 92%	(2.6) 52%	RUN-4						41.0ft: medium hard to moderately hard, friable to moderately indurated, few vugs	
-47.0	46.0												
		5.0	1:10 1:44 1:49 2:16 2:13	(4.4) 88%	(3.7) 74%	RUN-5						46.0ft: white (2.5Y8/1) to 46.5ft then light gray (10YR7/1) to 47.7ft	
-52.0	51.0						(43.6) 67%	(17.9) 28%				LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, trace vugs, fossiliferous, trace recrystallized calcite, strong HCl reaction (Lower Fort Thompson Formation)	
		5.0	2:04 1:47 1:52 1:28 0:59	(4.9) 98%	(4.0) 80%	RUN-6						51.0ft: moderately hard to hard	
-57.0	56.0												
		5.0	0:58 0:49 1:05 0:52 1:15	(4.2) 84%	(1.7) 34%	RUN-7						56.0ft: medium hard to moderately hard, friable to moderately indurated	
-62.0	61.0												
		5.0	1:41 1:27 1:41 0:45 0:31	(3.8) 76%	(2.9) 58%	RUN-8						61.0ft: medium hard to hard, friable to indurated, trace sand	
-67.0	66.0												
		5.0	0:28 0:11 0:30 0:38 0:28	(1.2) 24%	(0.0) 0%	RUN-9						66.0ft: soft to medium hard, friable to moderately indurated, little fine grained sand	
-72.0	71.0												
			N=12			714-10						71.0ft: Switch sampling method to SPT	
-73.5	72.5	3.5	0:14/0.5 0:14 0:23 0:25	(1.3) 37%	(0.0) 0%	RUN-10						71.0 to 71.5ft: POORLY GRADED SAND (SP), white (2.5Y8/1), medium dense, fine grained, strong HCl reaction	
-77.0	76.0											71.5ft: transition to limestone	
		5.0	0:22 0:35 3:29 2:09 0:42	(2.4) 48%	(0.5) 10%	RUN-11						72.5ft: Switch sampling method to coring	
-82.0	81.0											72.5ft: moderately hard, moderately indurated, trace fine sand	
		5.0	0:19 0:36 8:25 1:33 1:02	(2.7) 54%	(0.3) 6%	RUN-12						76.0ft: few sand	
-87.0	86.0												
		5.0	2:11 2:05 1:52 2:19 1:06	(4.6) 92%	(2.1) 42%	RUN-13						81.0ft: medium hard to moderately hard, friable to moderately indurated	
-92.0	91.0												
		5.0	1:01 1:11 0:55 0:58 1:26	(2.8) 56%	(0.0) 0%	RUN-14						86.0ft: moderately hard to hard, moderately indurated to indurated, little vugs, few shell molds	
-97.0	96.0												
		5.0	0:43 0:55 0:44 0:48 0:55	(3.1) 62%	(1.0) 20%	RUN-15						91.0ft: medium hard to moderately hard, friable to moderately indurated, sandy	
-102.0	101.0												
		5.0	0:28	(4.0)	(0.4)	RUN-16						96.0ft: moderately hard, moderately indurated, little vugs	
												101.0ft: mostly vugs, little to some shell molds and casts	

TURKEY POINT COL CORE: TURKEY POINT GPJ TURKEY POINT COL GDT 5 30/08