



GEOTECHNICAL BORING LOG

Prepared By Date 7-10-08Checked By Date 7-10-08

SHEET 1 OF 2

BECHTEL PROJECT NO.: 25409				MACTEC PROJECT NO.: 6468-07-1950				COUNTY: Miami-Dade				GEOLOGIST: S. Lehman				
SITE DESCRIPTION: Turkey Point COL				DRILL MACHINE: CME-45C (RAL)				DRILLER: D. Rhodes/ K. Guy				GROUND WATER (ft)				
BORING NO.: B-738				DRILL METHOD: Mud Rotary/ Core				SAMPLE METHODS: SPT/Core				0 HR. NA				
GROUND ELEV.: 0.1 ft (NAVD88)				NORTHING: 397,728 US ft (NAD83/90)				EASTING: 875,607 US ft (NAD83/90)				24 HR. NA				
TOTAL DEPTH: 101.2 ft				BORING DIAMETER: 4" to 13.5', 3" to 101.2'				CASING DEPTH: 4" to 13.5'				HAMMER (ID): 140 lb. Auto (MEC-12)				
DATE STARTED: 4/10/08				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.	MOI	LOG	SOIL AND ROCK DESCRIPTION			
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100						
0.1					Ground Surface									0.1		
0.1	0.0	WOH	1	WOH	1						738-1			0.0		
-3.4	3.5	WOH	1	4	5						738-2A&B			-1.9		
-6.0	6.1				22						738-3			-4.4		
-8.4	8.5	16	14	8	7						738-4			4.5		
-11.2	11.3	19	5	2	11						738-5					
-13.5	13.6	9	4	7							738-6					
		15	19	17	36											
-18.5	18.6										738-7					
-18.6	18.7	50/0.1									RUN-1			18.7ft: Switch sampling method to coring		
-21.8	21.9										RUN-2			18.6ft: hard, indurated		
														18.7ft: soft to moderately hard, friable to moderately indurate, trace locally interconnected vugs		
-26.8	26.9										RUN-3			-24.4		
-31.8	31.9										RUN-4			24.5		
-36.8	36.9										RUN-5					
-41.8	41.9										RUN-6					
-46.8	46.9										RUN-7					
-51.8	51.9										RUN-8			41.9ft: moderate hard, moderately indurated, soft friable zones, trace medium to coarse grained sand		
-56.8	56.9										RUN-9					
-61.8	61.9										RUN-10			36.9ft: few vugs		
-62.3	62.4	50/0.5									RUN-11			39.4 to 41.1ft: possible interbedded sand layers; based on drilling rates and recovery		
-64.5	64.6										RUN-12			41.9ft: hard, indurated		
-66.8	66.9															
-68.3	68.4	4	10	15	25						738-9			46.9ft: white (2.5Y8/1), and gray (2.5Y6/1), moderately hard, moderately indurated		
-71.8	71.9	WOR	WOR	WOR							738-10			49.3		
														49.4		

TURKEY POINT COL BORE: TURKEY POINT COL GDI 7/10/08



SHEET 2 OF 2

BECHTEL PROJECT NO.: 25409			MACTEC PROJECT NO.: 6468-07-1950			COUNTY: Miami-Dade			GEOLOGIST: S. Lehman			
SITE DESCRIPTION: Turkey Point COL			DRILL MACHINE: CME-45C (RAL)			DRILLER: D. Rhodes/ K. Guy			GROUND WATER (ft)			
BORING NO.: B-738			DRILL METHOD: Mud Rotary/ Core			SAMPLE METHODS: SPT/Core			0 HR. NA			
GROUND ELEV.: 0.1 ft (NAVD88)			NORTHING: 397,728 US ft (NAD83/90)			EASTING: 875,607 US ft (NAD83/90)			24 HR. NA			
TOTAL DEPTH: 101.2 ft			BORING DIAMETER: 4" to 13.5', 3" to 101.2'			CASING DEPTH: 4" to 13.5'			HAMMER (ID): 140 lb. Auto (MEC-12)			
DATE STARTED: 4/10/08			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 MOI	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100		
-74.7					Continued from previous page							
-76.4	76.5											
-77.9	78.0	1	2	28						738-11A&B RUN-13		POORLY GRADED SAND (SP), light gray (10YR7/1), very loose, wet, strong HCl reaction, few shell fragments, medium to coarse grained sand 71.9-74.5ft: rod drop (continued)
-81.8	81.9											
-83.1	83.2	24	41	50/0.3						738-12 RUN-14		LIMESTONE, boundstone, white (2.5Y8/1), soft to hard, friable to indurated, possible interbedded sand layers 81.9ft: hard, moderately indurated to indurated 83.2ft: soft to hard, friable to indurated
-86.8	86.9											
-87.2	87.3	50/0.4								738-13 RUN-15		86.9ft: hard, indurated 87.9ft: soft to hard, friable to indurated
-91.8	91.9									RUN-16		91.9ft: little vugs, few shell molds and casts
-96.0	96.1									RUN-17		
-100.8	100.9	50/0.3								738-14		100.9ft: hard, indurated Boring Terminated at Elevation -101.1 ft

TURKEY POINT COL BORE TURKEY POINT GPJ TURKEY POINT COL GDT 7/10/08



SHEET 1 OF 2

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BORING NO.: B-738				DRILL METHOD: Mud Rotary/ Core				SAMPLE METHODS: SPT/Core				0 HR. NA	
GROUND ELEV.: 0.1 ft (NAVD88)				NORTHING: 397,728 US ft (NAD83/90)				EASTING: 875,607 US ft (NAD83/90)				24 HR. NA	
TOTAL DEPTH: 101.2 ft				CASING DEPTH: 4" to 13.5'						HAMMER (ID): 140 lb. Auto (MEC-12)			
DATE STARTED: 4/10/08		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 @ 18.7 ft													
-18.6	18.7	3.2	0.44 0.05	(0.6) 19%	(0.0) 0%	RUN-1	(0.6) 10%	(0.0) 0%					LIMESTONE, boundstone, light gray (2.5Y7/1), very soft, friable, mostly oolitic (Miami Formation) (continued)
-21.8	21.9		0.34										18.7ft: soft to moderately hard, friable to moderately indurate, trace locally interconnected vugs
		5.0	1.10/0.2	(2.1) 42%	(1.8) 36%	RUN-2							
			0.54 1:03										
			0.59 1:14				(15.2) 61%	(10.4) 42%					LIMESTONE, boundstone, white (2.5Y8/1), medium hard to moderately hard, friable to moderately indurated, few vugs, recrystallized calcite, coralline (Upper Fort Thompson Formation)
-26.8	26.9	5.0	1.24	(3.6) 72%	(2.5) 50%	RUN-3							
			1:52 0:52										
			1:18 1:24										
-31.8	31.9	5.0	1:14	(2.7) 54%	(1.8) 36%	RUN-4							31.9ft: moderate hard, moderately indurated, soft friable zones, trace medium to coarse grained sand
			2:08 2:20										
			2:45 2:38										
-36.8	36.9	5.0	0:18 0:59	(1.5) 30%	(0.0) 0%	RUN-5							36.9ft: few vugs
			0:29 0:09										39.4 to 41.1ft: possible interbedded sand layers; based on drilling rates and recovery
-41.8	41.9	5.0	0:43	(2.8) 56%	(2.3) 46%	RUN-6							41.9ft: hard, indurated
			1:10 1:15										
			1:13 2:06										
-46.8	46.9	5.0	1:42 1:25	(3.8) 76%	(3.3) 66%	RUN-7							46.9ft: white (2.5Y8/1), and gray (2.5Y6/1), moderately hard, moderately indurated
			1:27 1:58				(6.9) 43%	(5.9) 37%					LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, few vugs, trace shell molds and casts (Lower Fort Thompson Formation)
-51.8	51.9	5.0	1:13	(3.6) 72%	(3.6) 72%	RUN-8							
			0:52 1:05										
			0:46 0:22										
-56.8	56.9	5.0	0:15	(0.5) 10%	(0.0) 0%	RUN-9							56.9 to 101.2ft: possible interbedded sand layers within soft, friable limestone; based on drilling rates and recovery
			0:43 1:03										
			0:51 0:54										
-61.8	61.9	5.0	1:09	(1.2) 55%	(1.0) 45%	RUN-10							Below 61.9ft: Alternate sampling methods between SPT and coring
			N=50/0.5										61.9ft: moderately indurated
-62.3	62.4	2.2	0:32/0.5	(0.3) 13%	(0.0) 0%	RUN-11							62.4ft: indurated, few medium to coarse grained sand
-64.5	64.6	2.3	4:24/0.7										
			0:22/0.3				(0.0) 0%	(NA)					66.9ft: POORLY GRADED SAND (SP), light gray (10YR7/1), medium dense, wet, strong HCl reaction, few shell fragments
-66.8	66.9		0:23 0:09										
			N=25	(1.0) 29%	(0.4) 11%	RUN-12							68.4ft: LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated
-68.3	68.4	3.5	0:16/0.5				(1.0) 53%	(0.4) 21%					
			0:27 0:32										
-71.8	71.9		0:12				(0.0) 0%	(NA)					POORLY GRADED SAND (SP), light gray (10YR7/1), very loose, wet, strong HCl reaction, few shell fragments, medium to coarse grained sand
			N=0										71.9-74.5ft: rod drop
			N=30										
						738-11A&B							
-77.9	78.0	3.9	0:40/0.9	(1.0) 26%	(0.0) 0%	RUN-13	(7.8) 36%	(1.3) 6%					LIMESTONE, boundstone, white (2.5Y8/1), soft to hard, friable to indurated, possible interbedded sand layers
			0:16 0:15										
-81.8	81.9		0:47										
			N=91/0.8										81.9ft: hard, moderately indurated to indurated
			0:37/0.7	(1.1) 30%	(0.0) 0%	RUN-14							83.2ft: soft to hard, friable to indurated
-83.1	83.2	3.7	0:13 0:17										
			0:44										
-86.8	86.9		N=50/0.4	(1.5) 33%	(0.0) 0%	RUN-15							86.9ft: hard, indurated
			0:57/0.6										87.9ft: soft to hard, friable to indurated
			0:50 0:54										
			0:41 1:03										
-91.8	91.9	4.2	0:27	(2.4) (1.3)		RUN-16							91.9ft: little vugs, few shell molds and casts
			0:22										

TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDI 7:10:08