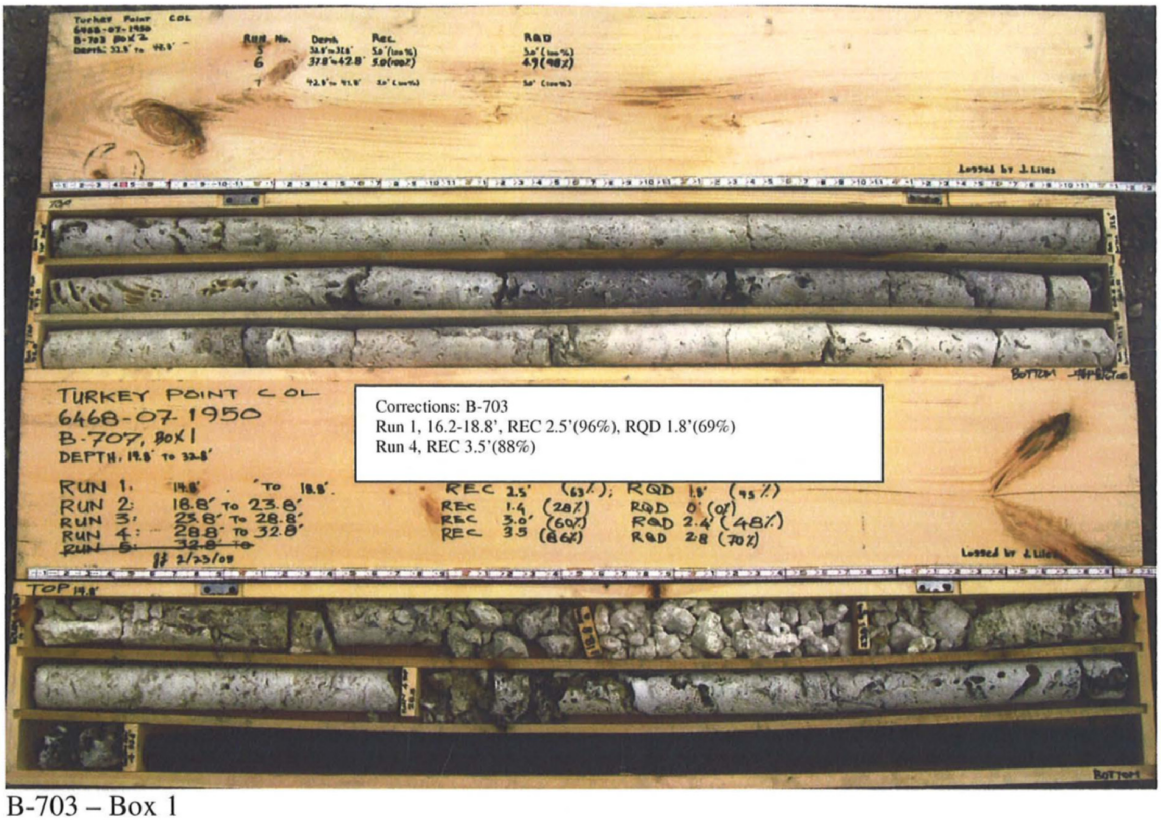
MACTEC

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-703	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.3 ft (NAVD88)	NORTHING: 397,018 US ft (NAD83/90)	EASTING: 875,846 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 150.0 ft	CASING DEPTH: 4" to 27.9', 3" to 115.0'		HAMMER (ID): 140 lb. Auto (M06)
DATE STARTED: 2/22/08	COMPLETED: 2/25/08	CORE SIZE: HQ3	CORE BARREL TYPE: Triple Tube Wireline (Split inner liners)

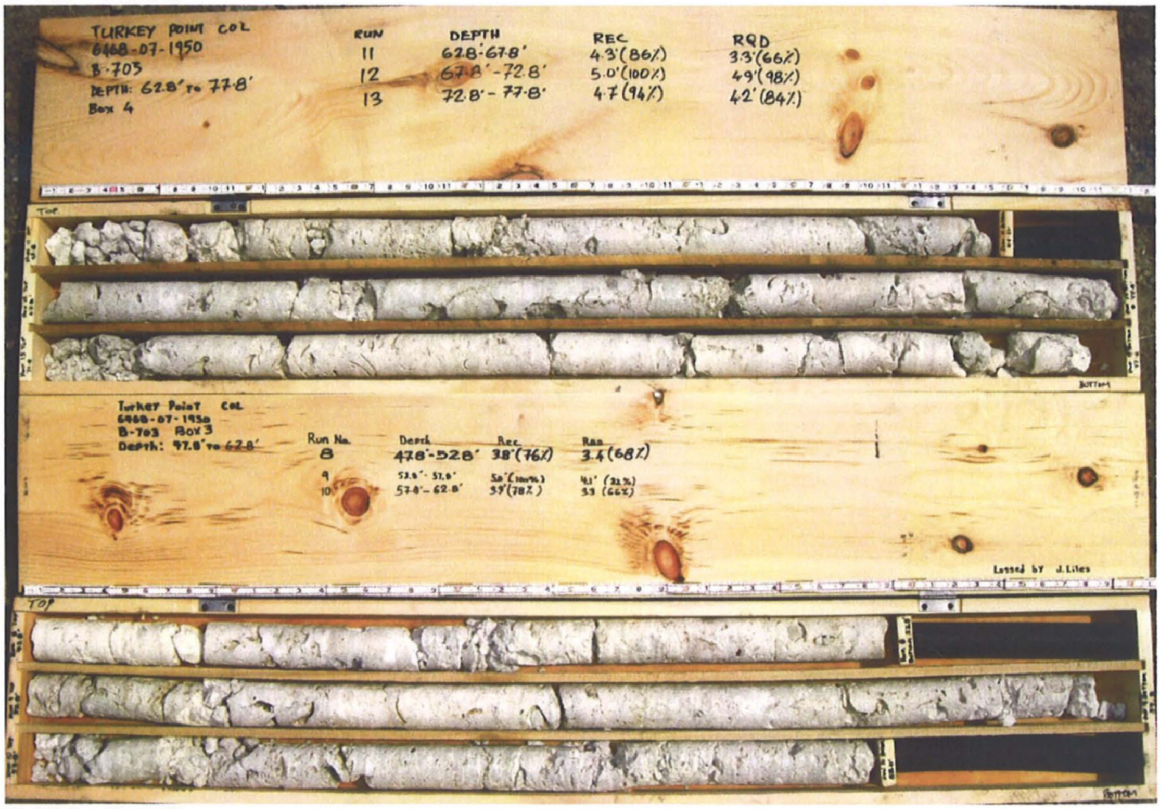
ELEV. (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS
										Continued from previous page
-94.1	92.8		0:23 0:34							LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, few vugs, fossiliferous, trace shell molds and casts (Lower Fort Thompson Formation) *(continued)*
		5.0	0:23 0:40 0:53 0:56	(4.7) 94%	(4.0) 80%	RUN-17				92.8ft: little vugs, little shell molds and casts
-99.1	97.8		0:47							
		5.0	0:37 0:37 0:44 1:00	(4.7) 94%	(4.2) 84%	RUN-18				97.8ft: hard
-104.1	102.8		0:36							
		5.0	0:36 0:20 0:35 0:59	(3.5) 70%	(3.3) 66%	RUN-19				102.8ft: few shell molds and casts
-108.3										107.0
-109.1	107.8		0:51				(0.0) 0%	(NA)		POORLY GRADED SAND with silt (SP-SM), light gray (5Y7/1), loose, wet, fine grained sand, few carbonate nodules, strong HCl reaction (Tamiami Formation)
		5.0	0:23 0:21 0:40 0:18	(0.0) 0%	(0.0) 0%	RUN-20				
-114.1	112.8		0:43							112.8
										Coring Terminated at Elevation -114.1

TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 8/18/08



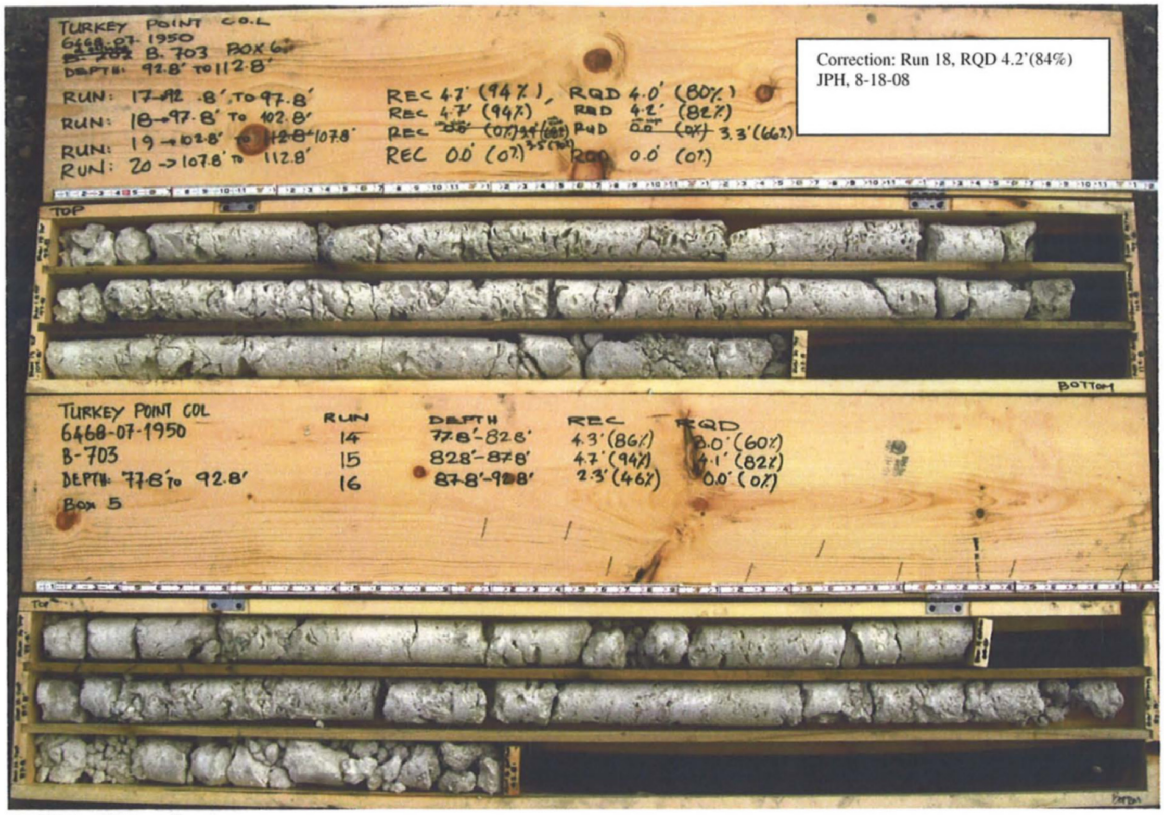
B-703 – Box 1

B-703 – Box 2



B-703 – Box 3

B-703 – Box 4



B-703 – Box 5
B-703 – Box 6

MACTEC

BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: R. Clark	
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-750 (Miller)	DRILLER: G.Bilbrey/P.McKorkle/J.Tucker	GROUND WATER (ft)	
BORING NO.: B-704(DH)	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR.	NA
GROUND ELEV.: -1.4 ft (NAVD88)	NORTHING: 396,931 US ft (NAD83/90)	EASTING: 875,742 US ft (NAD83/90)	24 HR.	NA
TOTAL DEPTH: 151.5 ft	CASING DEPTH: 4" to 36.0', 3" to 118.0'		HAMMER (ID): 140 lb. Auto (07)	
DATE STARTED: 2/25/08	COMPLETED: 2/27/08	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) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS
										Begin Coring @ 37.5 ft
-38.9 -41.4	37.5 40.0	2.5	0.25/0.5 3:04 4:27	(1.5) 60%	(0.6) 24%	RUN-1	(8.9) 88%	(7.4) 73%		LIMESTONE, boundstone, white (5Y8/1), very soft, wet, friable to indurated, strong HCl reaction, fossiliferous, trace sand (Upper Fort Thompson Formation)
-42.4	41.0	1.0	3:41	(1.0) 100%	(1.0) 100%	RUN-2				28.5ft: total loss of circulation *(continued)*
		5.0	1:13 1:38 1:38 1:13 2:14	(4.8) 96%	(4.8) 96%	RUN-3				37.5ft: white (5Y8/1), hard, indurated, strong HCl reaction, fossiliferous coralline, few vugs 41.0ft: recrystallized calcite
-47.4	46.0	5.0	0:52 0:46 3:05 4:20 3:25	(4.5) 90%	(3.4) 68%	RUN-4				46.0ft: light gray (5Y7/1) to 47.6ft
-49.0										47.6
-52.4	51.0						(49.8) 76%	(37.1) 56%		LIMESTONE, boundstone, white (5Y8/1), hard, indurated, fossiliferous, porous, few vugs, few shell molds and casts, strong HCl reaction (Lower Fort Thompson Formation)
-57.4	56.0	5.0	2:51 1:23 1:39 1:51 0:55	(4.9) 98%	(4.9) 98%	RUN-5				
-62.4	61.0	5.0	2:22 1:18 1:07 1:45 2:11	(4.5) 90%	(3.0) 60%	RUN-6				56.0ft: friable zones, fine grained sand lense
-67.4	66.0	5.0	0:55 0:59 0:57 1:06 2:14	(5.0) 100%	(4.6) 92%	RUN-7				64.0 to 65.0ft: calcareous fine grained sand
-72.4	71.0	5.0	1:04 0:56 0:41 0:31 1:21	(2.2) 44%	(0.5) 10%	RUN-8				
-77.4	76.0	5.0	1:06 1:31 0:19 0:05 0:23	(1.3) 26%	(0.0) 0%	RUN-9				71.0ft: soft friable zones, trace fine grained calcareous sand
-82.4	81.0	5.0	0:20 0:26 2:18 2:19 1:04	(2.0) 40%	(0.4) 8%	RUN-10				76.0ft: moderately hard, moderately indurated
-87.4	86.0	5.0	0:51 1:15 0:53 0:27 0:59	(2.6) 52%	(1.4) 28%	RUN-11				81.0ft: moderately hard to hard, moderately indurated to indurated 85.0 to 85.5ft: friable zone
-92.4	91.0	5.0	3:37 4:15 3:04 2:02 3:05	(5.0) 100%	(4.5) 90%	RUN-12				86.0ft: three thin, soft, friable zones at 86.3, 88.7 and 90.3ft
-97.4	96.0	5.0	1:02 0:41 1:22 0:53 1:55	(4.2) 84%	(3.1) 62%	RUN-13				91.0ft: two thin, soft, friable zones at 93.0 and 95.4ft
-102.4	101.0	5.0	2:02 1:21 0:09 2:43 1:57	(3.5) 70%	(3.1) 62%	RUN-14				96.0ft: little vugs
-107.4	106.0	5.0	1:25 1:06 1:10 0:59 1:39	(5.0) 100%	(5.0) 100%	RUN-15				
-112.4	111.0	5.0	0:45 1:07 0:49 1:01 0:45	(4.2) 84%	(3.6) 72%	RUN-16				106.0ft: few vugs
		5.0	0:55	(2.5)	(0.6)	RUN-17				

TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 8/18/08

MACTEC

BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: R. Clark
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-750 (Miller)	DRILLER: G.Bilbrey/P.McKorkle/J.Tucker	GROUND WATER (ft)
BORING NO.: B-704(DH)	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.4 ft (NAVD88)	NORTHING: 396,931 US ft (NAD83/90)	EASTING: 875,742 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 151.5 ft	CASING DEPTH: 4" to 36.0', 3" to 118.0'		HAMMER (ID): 140 lb. Auto (07)
DATE STARTED: 2/25/08	COMPLETED: 2/27/08	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) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS
										Continued from previous page
			0:59 1:12 0:42 0:51	50%	12%					-114.9 113.5
-117.4	116.0						(0.0) 0%	(NA)		Silty SAND (SM), white (5Y8/1), medium dense, wet, strong HCl reaction, calcareous, trace shell fragments, fine grained sand (Tamiami Formation -117.4 116.0
										Coring Terminated at Elevation -117.4

TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 8/18/08

MACTEC

GEOTECHNICAL BORING LOG

Prepared By JPH Date 8-19-08

Checked By SJL Date 8/19/08

BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: R. Clark
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-750 (Miller)	DRILLER: G.Bilbrey/P.McKorkle/J.Tucker	GROUND WATER (ft)
BORING NO.: B-704(DH)	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.4 ft (NAVD88)	NORTHING: 396,931 US ft (NAD83/90)	EASTING: 875,742 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 151.5 ft	BORING DIAMETER: 4" to 36.0', 3" to 151.5'	CASING DEPTH: 4" to 36.0', 3" to 118.0'	HAMMER (ID):140 lb. Auto (07)
DATE STARTED: 2/25/08	COMPLETED: 2/27/08	CORE SIZE: HQ3	BITS USED: 2 15/16" Drag Bit & 3 7/8" Tricones

ELEV. (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 20 40 60 80 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-1.4					Ground Surface				
-1.4	0.0	WOH	WOH	WOH	WOH	704(DH)-1			-1.4 0.0 MUCK, greenish brown (10YR5/2), very soft, wet, strong HCl reaction, mostly organics
-3.8	2.4	3	4	5	9	704(DH)-2A&B			-4.5 3.1 2.4ft: grayish brown (2.5Y5/2), to dark grayish brown (2.5Y4/2), soft
-6.4	5.0	6	6	5	SEE LEGEND FOR ROCK HARDNESS CRITERIA BASED ON SPT DATA 11	704(DH)-3			LIMESTONE, boundstone, white (5Y8/1), very soft, friable, wet, strong HCl reaction (Miami Formation)
-8.8	7.4	6	3	5	8	704(DH)-4			3.1ft: some loss of circulation
-11.3	9.9	2	5	4	9	704(DH)-5			5.0ft: fossiliferous, oolitic
-13.9	12.5	9	17	21	38	704(DH)-6			12.5ft: medium hard
-16.4	15.0	4	8	10	18	704(DH)-7			15.0ft: very soft
-19.4	18.0	29	17	6	23	704(DH)-8			18.0ft: soft
-24.6	23.2	3	5	7	12	704(DH)-9			23.2ft: very soft
-27.4	26.0								LIMESTONE, boundstone, white (5Y8/1), very soft, wet, friable to indurated, strong HCl reaction, fossiliferous, trace sand (Upper Fort Thompson Formation)
-29.9	28.5	1	1	1	2	704(DH)-10			28.5ft: total loss of circulation
-31.9	30.5	4	2	4	6	704(DH)-11			30.5ft: friable, some fine to medium grained sand
-37.4	36.0	9	14	16	30	704(DH)-12			36.0ft: soft, moderately indurated, trace recrystallized calcite, trace chert
-38.9	37.5					RUN-1			37.5ft: Switch sampling method to coring
-41.4	40.0					RUN-2			37.5ft: white (5Y8/1), hard, indurated, strong HCl reaction, fossiliferous, coralline, few vugs
-42.4	41.0					RUN-3			41.0ft: recrystallized calcite
-47.4	46.0					RUN-4			-49.0 47.6 46.0ft: light gray (5Y7/1) to 47.6ft
-52.4	51.0					RUN-5			LIMESTONE, boundstone, white (5Y8/1), hard, indurated, fossiliferous, porous, few vugs, few shell molds and casts, strong HCl reaction (Lower Fort Thompson Formation)
-57.4	56.0					RUN-6			56.0ft: friable zones, fine grained sand lense
-62.4	61.0					RUN-7			64.0 to 65.0ft: calcareous fine grained sand
-67.4	66.0					RUN-8			
-72.4	71.0					RUN-9			71.0ft: soft friable zones, trace fine grained calcareous sand

TURKEY POINT COL BORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 8/15/08

MACTEC

BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: R. Clark
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-750 (Miller)	DRILLER: G.Bilbrey/P.McKorkle/J.Tucker	GROUND WATER (ft)
BORING NO.: B-704(DH)	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.4 ft (NAVD88)	NORTHING: 396,931 US ft (NAD83/90)	EASTING: 875,742 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 151.5 ft	BORING DIAMETER: 4" to 36.0', 3" to 151.5'	CASING DEPTH: 4" to 36.0', 3" to 118.0'	HAMMER (ID):140 lb. Auto (07)
DATE STARTED: 2/25/08	COMPLETED: 2/27/08	CORE SIZE: HQ3	BITS USED: 2 15/16" Drag Bit & 3 7/8" Tricones

ELEV. (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 20 40 60 80 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-76.2					Continued from previous page				
-77.4	76.0					RUN-10			LIMESTONE, boundstone, white (5Y8/1), hard, indurated, fossiliferous, porous, few vugs, few shell molds and casts, strong HCl reaction (Lower Fort Thompson Formation) *(continued)* 76.0ft: moderately hard, moderately indurated
-82.4	81.0					RUN-11			81.0ft: moderately hard to hard, moderately indurated to indurated 85.0 to 85.5ft: friable zone
-87.4	86.0					RUN-12			86.0ft: three thin, soft, friable zones at 86.3, 88.7 and 90.3ft
-92.4	91.0					RUN-13			91.0ft: two thin, soft, friable zones at 93.0 and 95.4ft
-97.4	96.0					RUN-14			96.0ft: little vugs
-102.4	101.0					RUN-15			
-107.4	106.0					RUN-16			106.0ft: few vugs
-112.4	111.0					RUN-17			
-114.9	113.5								Silty SAND (SM), white (5Y8/1), medium dense, wet, strong HCl reaction, calcareous, trace shell fragments, fine grained sand (Tamiami Formation 116.0ft: Switch sampling method to SPT
-117.4	116.0	4	5	6	11	704(DH)-13			
-121.4	120.0	3	3	5	8	704(DH)-14			120.0ft: loose, little shell fragments, limestone fragments
-124.4	123.0	4	2	1	3	704(DH)-15			123.0ft: pale yellow (5Y8/2), very loose, weak HCl reaction
-129.4	128.0	4	2	2	4	704(DH)-16			
-134.4	133.0	3	3	4	7	704(DH)-17			133.0ft: loose, fine to coarse grained sand, fine gravel
-139.4	138.0	4	7	5	12	704(DH)-18			138.0ft: greenish gray (10Y6/1), medium dense, trace shell fragments, fine to coarse gravel
-144.4	143.0	6	7	8	15	704(DH)-19			
-149.4	148.0	7	7	9	16	704(DH)-20			

TURKEY POINT COL BORE TURKEY POINT GPJ TURKEY POINT COL GDT 8/18/08

MACTEC

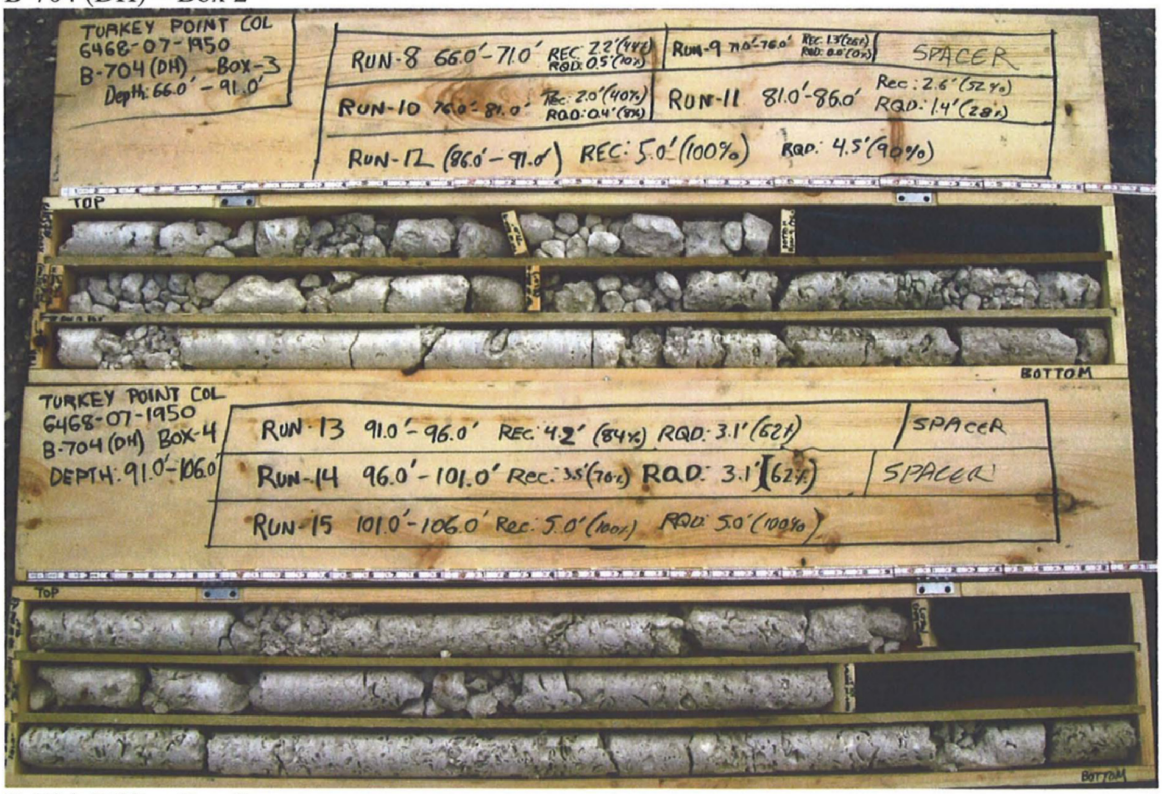
BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: R. Clark	
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-750 (Miller)	DRILLER: G.Bilbrey/P.McKorkle/J.Tucker	GROUND WATER (ft)	
BORING NO.: B-704(DH)	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR.	NA
GROUND ELEV.: -1.4 ft (NAVD88)	NORTHING: 396,931 US ft (NAD83/90)	EASTING: 875,742 US ft (NAD83/90)	24 HR.	NA
TOTAL DEPTH: 151.5 ft	BORING DIAMETER: 4" to 36.0', 3" to 151.5'	CASING DEPTH: 4" to 36.0', 3" to 118.0'	HAMMER (ID):140 lb. Auto (07)	
DATE STARTED: 2/25/08	COMPLETED: 2/27/08	CORE SIZE: HQ3	BITS USED: 2 15/16" Drag Bit & 3 7/8" Tricones	

ELEV. (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 20 40 60 80 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-151.0					Continued from previous page				
-151.4	150.0	8	7	8	15	704(DH)-21			-152.9 151.5 Boring Terminated at Elevation -152.9 ft

TURKEY POINT COL BORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 8/18/08



B-704 (DH) – Box 1
B-704 (DH) – Box 2



B-704 (DH) – Box 3
B-704 (DH) – Box 4


TURKEY POINT COL
6468-07-1950
B-704 (DH) BOX-5
DEPTH: 106.0' – 116.0'
RUN-16 106.0'-111.0' REC: 4.2' (84%) ROD: 3.6' (72%)
RUN-17 111.0' – 116.0' REC: 2.5' (50%) ROD: 0.6' (12%)
SPACE NOT USED!
TOP
BOTTOM

B-704 (DH) – Box 5