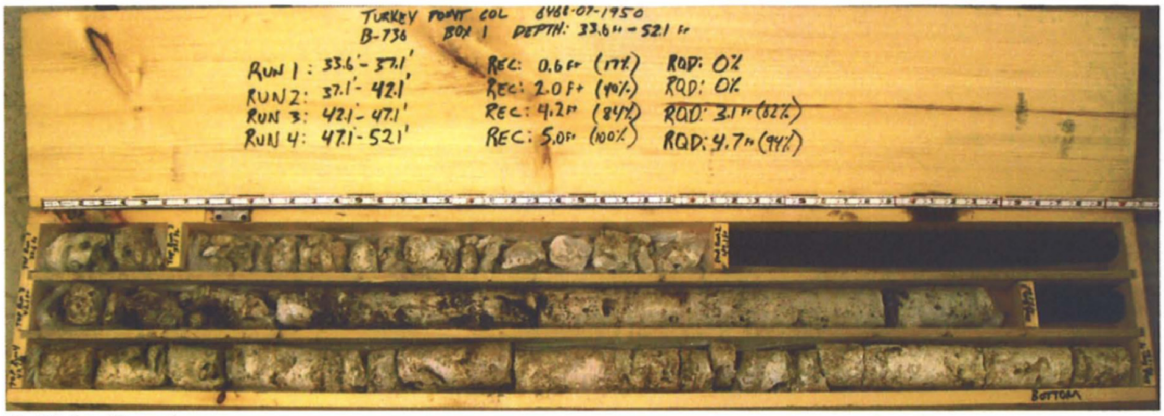
MACTEC

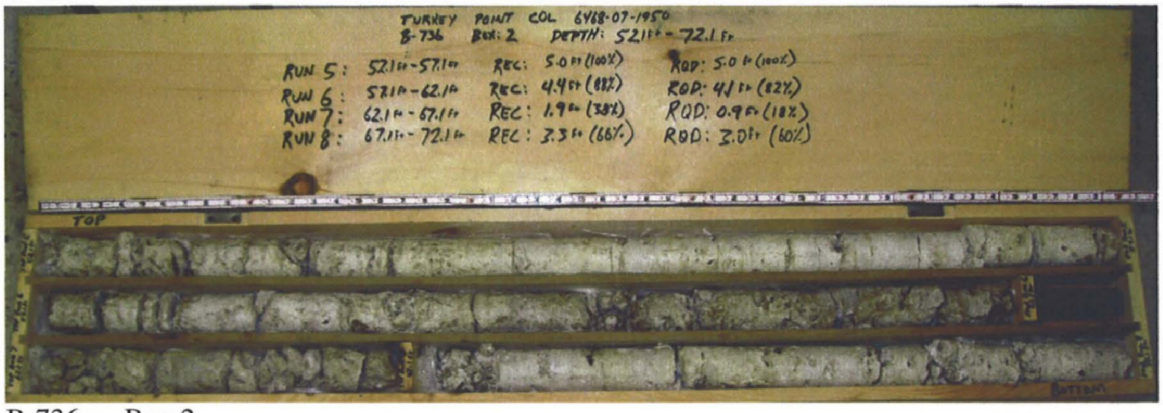
BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: S. Lehman
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-45C (RAL)	DRILLER: D. Rhodes/ N. Vasquez	GROUND WATER (ft)
BORING NO.: B-736	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -0.5 ft (NAVD88)	NORTHING: 395,809 US ft (NAD83/90)	EASTING: 876,107 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 125.0 ft	CASING DEPTH: 4" to 24.8', 3" to 113.3'		HAMMER (ID): 140 lb. Auto (MEC-12)
DATE STARTED: 4/5/08	COMPLETED: 4/8/08	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
-112.6	112.1		0:55 0:36 1:07 0:46	26%	0%					LIMESTONE, boundstone, white (2.5Y8/1), moderately hard to hard, moderately indurated to indurated, few vugs, recrystallized calcite, trace to few shell molds and casts (Lower Fort Thompson Formation) *(continued)*
-114.5		5.0	0:52 1:16	(0.9) 18%	(0.0) 0%	RUN-17				112.1ft: soft to moderately hard, friable to moderately indurated, little sand — 114.0
-117.6	117.1		1:12 0:53 1:01				(0.0) 0%	(NA)		POORLY GRADED SAND (SP-SM), light gray (5Y7/2), medium dense, wet, fine grained sand, weak HCl reaction, fragments of cemented sand (Tamiami Formation) — 117.1
										Coring Terminated at Elevation -117.6

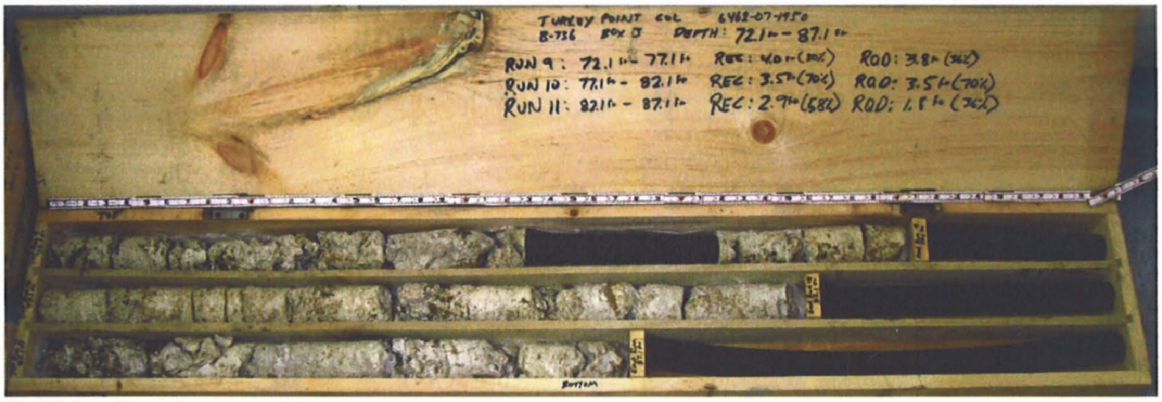
TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 8/19/08



B-736 – Box 1

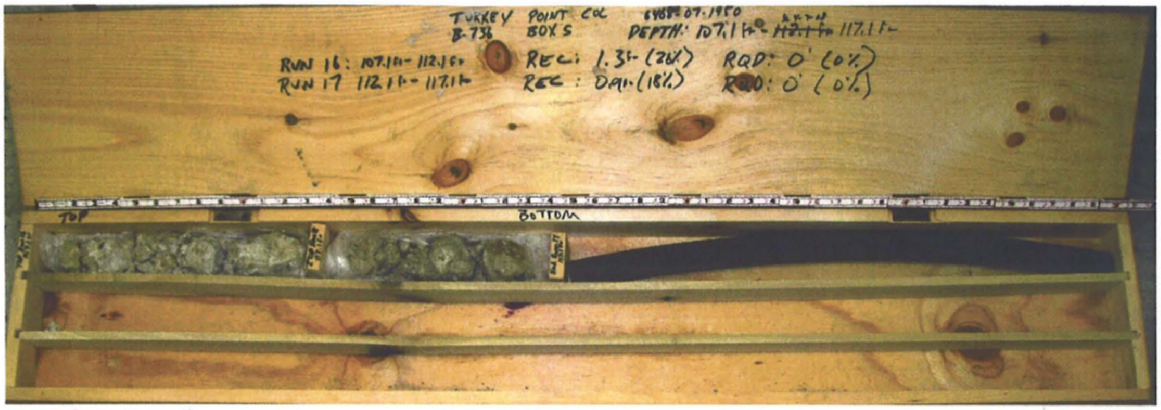


B-736 – Box 2



B-736 – Box 3

B-736 – Box 4


TURKEY POINT COL
B-736
BOX 5
DEPTH: 107.1 ft - 117.1 ft
RUN 16: 107.1 ft - 112.1 ft
RUN 17 112.1 ft - 117.1 ft
REC: 1.3 ft (26%)
REC: 0.9 ft (18%)
RQD: 0' (0%)
RQD: 0' (0%)
TOP
BOTTOM

B-736 – Box 5

MACTEC

GEOTECHNICAL BORING LOG

Prepared By [illegible] Date 7-10-08
Checked By [illegible] Date 7-10-08

BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: H. Lyatuu
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-550 Marsh Buggy	DRILLER: F. Cox/ R. Hall	GROUND WATER (ft)
BORING NO.: B-737	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -0.6 ft (NAVD88)	NORTHING: 395,804 US ft (NAD83/90)	EASTING: 876,238 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 153.3 ft	BORING DIAMETER: 4" to 30.0', 3" to 153.3'	CASING DEPTH: 4" to 30.0', 3" to 115.0'	HAMMER (ID):140 lb. Auto (893)
DATE STARTED: 4/3/08	COMPLETED: 4/5/08	CORE SIZE: HQ3	BITS USED: 2 15/16" Tricone

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
-0.6					Ground Surface				-0.6 / 0.0
-0.6 / -3.1	0.0 / 2.5	WOR	WOR	WOH	WOH 0	737-1			MUCK, light brownish gray (10YR6/2), mottled very dark gray (10YR3/1), and black (10YR2/1), very soft, wet, little fine grained sand, trace shell fragments, strong HCl reaction
-5.6	5.0	WOH	WOH	WOH	WOH 0	737-2			-5.1 / 4.5
-8.1	7.5	5	5	4	9	737-3			2.5ft: very dark gray (10YR3/1), weak HCl reaction
-10.6	10.0	1	2	15	17	737-4			LIMESTONE, boundstone, white (10YR8/1), very soft, wet, trace shells, strong HCl reaction, oolitic (Miami Formation)
-13.1	12.5	2	2	4	6	737-5			10.0ft: trace fine grained sand
-15.6	15.0	5	7	14	21	737-6			12.5ft: soft, trace dark brown rocky fragments
-19.2	18.6	8	8	50/0.2	58/0.7	737-7			15.0ft: hard, trace fragments of cemented sands
-24.2	23.6	17	10	15	25	737-8			18.6ft: white (7.5YR8/1), soft, fossiliferous
-29.2	28.6	4	6	3	9	737-9			23.6ft: white (2.5Y8/1), very soft
-34.2	33.6	2	3	5	8	737-10			28.6ft: white (10YR8/1), mottled greenish gray (5GY5/1), some fine grained sand
-34.4	33.8	50/0.2			50/0.2	737-11			-32.6 / 32.0
-37.4	36.8					RUN-1			LIMESTONE, boundstone, white (10YR8/1 and 2.5Y8/1), hard, wet, fossiliferous, strong HCl reaction (Upper Fort Thompson Formation)
-42.4	41.8					RUN-2			33.8ft: Switch sampling method to coring
-47.4	46.8					RUN-3			33.8ft: hard, indurated, coralline, trace recrystallized calcite, little locally interconnected vugs, fossiliferous
-52.4	51.8					737-CS-01			36.8ft: few vugs, interbedded friable layers
-57.4	56.8					737-CS-02			41.8ft: trace vugs
-62.4	61.8					RUN-4			-48.7 / 48.1
-67.4	66.8					RUN-5			LIMESTONE, boundstone, white (7.5YR8/1), moderately hard to hard, friable to indurated, trace vugs, fossiliferous, strong HCl reaction, few shell molds and casts (Lower Fort Thompson Formation)
-72.4	71.8					RUN-6			51.8ft: white (2.5Y8/1), moderately hard, moderately indurated, trace sand
						RUN-7			56.8ft: white (10YR8/1), moderately hard to hard, moderately indurated to indurated
						RUN-8			61.8ft: moderately hard, moderately indurated
						RUN-9			71.8ft: no recovery, possible interbedded soft, friable, limestone and sand layers

SEE LEGEND FOR ROCK HARDNESS CRITERIA BASED ON SPT DATA

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

MACTEC

BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: H. Lyatuu
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-550 Marsh Buggy	DRILLER: F. Cox/ R. Hall	GROUND WATER (ft)
BORING NO.: B-737	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -0.6 ft (NAVD88)	NORTHING: 395,804 US ft (NAD83/90)	EASTING: 876,238 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 153.3 ft	BORING DIAMETER: 4" to 30.0', 3" to 153.3'	CASING DEPTH: 4" to 30.0', 3" to 115.0'	HAMMER (ID): 140 lb. Auto (893)
DATE STARTED: 4/3/08	COMPLETED: 4/5/08	CORE SIZE: HQ3	BITS USED: 2 15/16" Tricone

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
-75.4					Continued from previous page				
-77.4	76.8								LIMESTONE, boundstone, white (7.5YR8/1), moderately hard to hard, friable to indurated, trace vugs, fossiliferous, strong HCl reaction, few shell molds and casts (Lower Fort Thompson Formation) *(continued)*
-78.4	77.8	22	50/0.5		50/1.0	737-12			76.8ft: Switch sampling method to SPT
						RUN-10			76.8ft: hard
-82.4	81.8								77.8ft: Switch sampling method to coring
						RUN-11			77.8ft: moderately hard, moderately indurated
-87.4	86.8								81.8ft: moderately hard to hard, moderately indurated to indurated, few vugs, trace shell molds and casts
						RUN-12			86.8ft: moderately hard to medium hard, trace vugs
-92.4	91.8								
						RUN-13			91.8ft: medium hard, moderately indurated
-97.4	96.8								
-98.9	98.3	34	13	27	40	737-13			96.8ft: Switch sampling method to SPT
						RUN-14			96.8ft: moderately hard
-102.4	101.8								98.3ft: Switch sampling method to coring
						RUN-15			98.3ft: few vugs, mostly shell molds and casts
-107.4	106.8								
						RUN-16			
-112.4	111.8								
		6	3	6	9	737-14A&B			-113.3 111.8ft: very soft, trace cemented sand fragments 112.7
									111.8ft: Switch sampling method to SPT
									Silty SAND (SM), light gray (10YR7/3), to very pale brown (10YR7/3), loose, wet, fine to coarse grained sand, fine to coarse gravel, strong HCl reaction (Tamiami Formation)
-122.4	121.8								
		5	5	11	16	737-15			121.8ft: pale brown (10YR6/3), medium dense, weak HCl reaction, fine gravel
-132.4	131.8								
		5	5	9	14	737-16			131.8ft: greenish gray (10Y6/1)
-142.4	141.8								
		6	11	15	26	737-17			141.8ft: greenish gray (5GY6/1), fine to medium grained sand

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

MACTEC

BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: H. Lyatuu
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-550 Marsh Buggy	DRILLER: F. Cox/ R. Hall	GROUND WATER (ft)
BORING NO.: B-737	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -0.6 ft (NAVD88)	NORTHING: 395,804 US ft (NAD83/90)	EASTING: 876,238 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 153.3 ft	BORING DIAMETER: 4" to 30.0', 3" to 153.3'	CASING DEPTH: 4" to 30.0', 3" to 115.0'	HAMMER (ID):140 lb. Auto (893)
DATE STARTED: 4/3/08	COMPLETED: 4/5/08	CORE SIZE: HQ3	BITS USED: 2 15/16" Tricone

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
-150.2					Continued from previous page				
-152.4	151.8								
		5	8	13	21	737-18			-153.9 / 153.3
									Boring Terminated at Elevation -153.9 ft

MACTEC

BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: H. Lyatuu
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-550 Marsh Buggy	DRILLER: F. Cox/ R. Hall	GROUND WATER (ft)
BORING NO.: B-737	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -0.6 ft (NAVD88)	NORTHING: 395,804 US ft (NAD83/90)	EASTING: 876,238 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 153.3 ft	CASING DEPTH: 4" to 30.0', 3" to 115.0'		HAMMER (ID): 140 lb. Auto (893)
DATE STARTED: 4/3/08	COMPLETED: 4/5/08	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 @ 33.8 ft
-34.4	33.8	3.0	3:08 3:20 2:50	(3.0) 100%	(1.0) 33%	RUN-1	(12.5) 87%	(6.6) 46%		LIMESTONE, boundstone, white (10YR8/1 and 2.5Y8/1), hard, wet, fossiliferous, strong HCl reaction (Upper Fort Thompson Formation) *(continued)*
-37.4	36.8									33.8ft: hard, indurated, coralline, trace recrystallized calcite, little locally interconnected vugs, fossiliferous
		5.0	2:16 1:28 3:25 3:16 3:25	(3.8) 76%	(1.2) 24%	RUN-2				36.8ft: few vugs, interbedded friable layers
-42.4	41.8									
		5.0	2:54 4:09 3:20 3:30 3:00	(4.4) 88%	(4.4) 88%	RUN-3 *737-CS-01* *737-CS-02*				41.8ft: trace vugs
-47.4	46.8									
		5.0	2:50 2:29 3:18 2:27 2:46	(5.0) 100%	(3.7) 74%	RUN-4				-48.7 48.1
-52.4	51.8						(24.2) 40%	(7.7) 13%		LIMESTONE, boundstone, white (7.5YR8/1), moderately hard to hard, friable to indurated, trace vugs, fossiliferous, strong HCl reaction, few shell molds and casts (Lower Fort Thompson Formation)
		5.0	1:59 2:18 2:17 2:36 4:55	(2.6) 52%	(0.8) 16%	RUN-5				51.8ft: white (2.5Y8/1), moderately hard, moderately indurated, trace sand
-57.4	56.8									
		5.0	2:51 1:52 1:43 1:44 2:05	(4.3) 86%	(1.2) 24%	RUN-6				56.8ft: white (10YR8/1), moderately hard to hard, moderately indurated to indurated
-62.4	61.8									
		5.0	1:55 1:06 1:37 0:58 1:29	(0.9) 18%	(0.0) 0%	RUN-7				61.8ft: moderately hard, moderately indurated
-67.4	66.8									
		5.0	1:35 1:34 1:53 1:12 1:01	(0.9) 18%	(0.0) 0%	RUN-8				
-72.4	71.8									
		5.0	0:57 0:43 1:21 1:51 1:56	(0.0) 0%	(0.0) 0%	RUN-9				71.8ft: no recovery, possible interbedded soft, friable, limestone and sand layers
-77.4	76.8									
			N=50/1.0			*737-12*				76.8ft: Switch sampling method to SPT
-78.4	77.8	4.0	2:51 2:37 2:44 2:49	(2.0) 50%	(0.7) 18%	RUN-10				76.8ft: hard 77.8ft: Switch sampling method to coring 77.8ft: moderately hard, moderately indurated
-82.4	81.8									
		5.0	2:00 0:45 0:52 2:03 2:37	(2.2) 44%	(0.0) 0%	RUN-11				81.8ft: moderately hard to hard, moderately indurated to indurated, few vugs, trace shell molds and casts
-87.4	86.8									
		5.0	3:15 2:07 2:36 1:30 1:15	(1.7) 34%	(0.4) 8%	RUN-12				86.8ft: moderately hard to medium hard, trace vugs
-92.4	91.8									
		5.0	2:22 0:57 0:47 1:26 1:37	(0.5) 10%	(0.0) 0%	RUN-13				91.8ft: medium hard, moderately indurated
-97.4	96.8									
			N=40			*737-13*				96.8ft: Switch sampling method to SPT
-98.9	98.3	3.5	2:10 2:03 1:13 1:14/0.5	(3.3) 94%	(0.9) 26%	RUN-14				96.8ft: moderately hard 98.3ft: Switch sampling method to coring 98.3ft: few vugs, mostly shell molds and casts
-102.4	101.8									
		5.0	1:22 1:05 1:20 1:09 1:12	(1.8) 36%	(0.0) 0%	RUN-15				
-107.4	106.8									
		5.0	1:00	(0.3)	(0.0)	RUN-16				

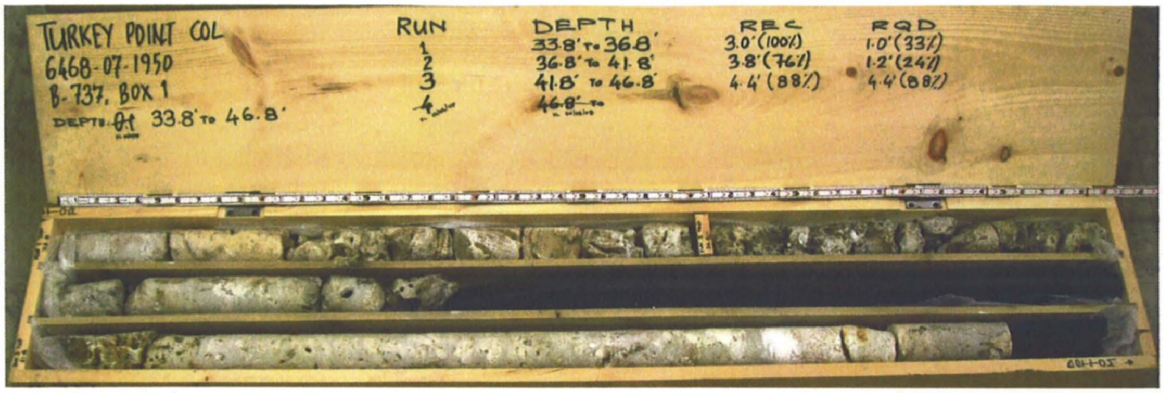
TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 7/10/08

MACTEC

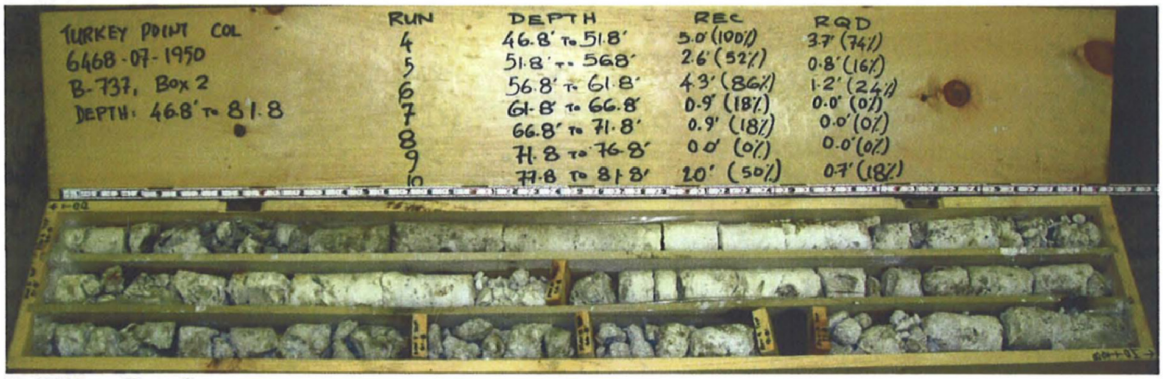
BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: H. Lyatuu
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-550 Marsh Buggy	DRILLER: F. Cox/ R. Hall	GROUND WATER (ft)
BORING NO.: B-737	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -0.6 ft (NAVD88)	NORTHING: 395,804 US ft (NAD83/90)	EASTING: 876,238 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 153.3 ft	CASING DEPTH: 4" to 30.0', 3" to 115.0'		HAMMER (ID): 140 lb. Auto (893)
DATE STARTED: 4/3/08	COMPLETED: 4/5/08	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
-112.4	111.8		1:25 1:00 1:27 0:47	6%	0%					LIMESTONE, boundstone, white (7.5YR8/1), moderately hard to hard, friable to indurated, trace vugs, fossiliferous, strong HCl reaction, few shell molds and casts (Lower Fort Thompson Formation) *(continued)* -112.4 111.8 Coring Terminated at Elevation -112.4

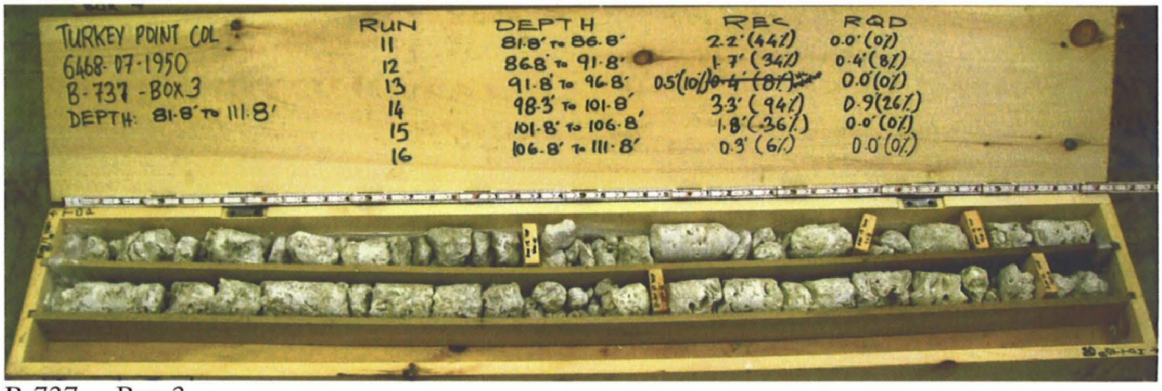
TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 7/10/08



B-737 – Box 1



B-737 – Box 2



B-737 – Box 3

MACTEC

GEOTECHNICAL BORING LOG

Prepared By [illegible] Date 7-10-08
Checked By [illegible] Date 7-10-08

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 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT (0 20 40 60 80 100)	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
0.1					Ground Surface				0.1 / 0.0
0.1 / -3.4	0.0 / 3.5	WOH	1	WOH	WOH, 1	738-1			Sandy FAT CLAY (CH), very dark grayish brown (10YR3/2), very soft, moist, fine sand, strong HCl reaction (-1.9 / 2.0)
-6.0	6.1	WOH	1	4	5	738-2A&B			MUCK, very dark grayish brown (2.5Y3/2), soft, wet, organics, strong HCl reaction (-4.4 / 4.5)
-8.4	8.5	16	14	8	22	738-3			LIMESTONE, boundstone, light gray (2.5Y7/1), very soft, friable, mostly oolitic (Miami Formation)
-11.2	11.3	19	5	2	7	738-4			6.1ft: white (2.5Y8/1), soft, moderately indurated
-13.5	13.6	9	4	7	11	738-5			8.5ft: very soft, moderately indurated to friable 11.3ft: moderately indurated
-18.5	18.6	15	19	17	36	738-6			13.6ft: medium hard
-18.6 / -21.8	18.7 / 21.9	50/0.1			50/0.1	738-7 RUN-1 RUN-2			18.7ft: Switch sampling method to coring 18.6ft: hard, indurated 18.7ft: soft to moderately hard, friable to moderately indurate, trace locally interconnected vugs
-24.4	24.5								
-26.8	26.9					RUN-3			LIMESTONE, boundstone, white (2.5Y8/1), medium hard to moderately hard, friable to moderately indurated, few vugs, recrystallized calcite, coralline (Upper Fort Thompson Formation)
-31.8	31.9					RUN-4			31.9ft: moderate hard, moderately indurated, soft friable zones, trace medium to coarse grained sand
-36.8	36.9					RUN-5			36.9ft: few vugs 39.4 to 41.1ft: possible interbedded sand layers; based on drilling rates and recovery
-41.8	41.9					RUN-6			41.9ft: hard, indurated
-46.8	46.9					RUN-7			46.9ft: white (2.5Y8/1), and gray (2.5Y6/1), moderately hard, moderately indurated
-49.3	49.4								LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, few vugs, trace shell molds and casts (Lower Fort Thompson Formation)
-51.8	51.9					RUN-8			
-56.8	56.9					RUN-9			56.9 to 101.2ft: possible interbedded sand layers within soft, friable limestone; based on drilling rates and recovery
-61.8 / -62.3	61.9 / 62.4	50/.5			50/.5	738-8 RUN-10			Below 61.9ft: Alternate sampling methods between SPT and coring 61.9ft: moderately indurated
-64.5	64.6								
-65.9	66.0					RUN-11			62.4ft: indurated, few medium to coarse grained sand
-66.8	66.9								
-68.3	68.4	4	10	15	25	738-9 RUN-12			66.9ft: POORLY GRADED SAND (SP), light gray (10YR7/1), medium dense, wet, strong HCl reaction, few shell fragments (-69.9 / 70.0)
-69.9	70.0								
-71.8	71.9	WOR	WOR	WOR	0	738-10			68.4ft: LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated (-71.8 / 71.9)

SEE LEGEND FOR ROCK HARDNESS CRITERIA BASED ON SPT DATA

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

MACTEC

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 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT (0 20 40 60 80 100)	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-74.7					Continued from previous page				
-76.4	76.5								POORLY GRADED SAND (SP), light gray (10YR7/1), very loose, wet, strong HCl reaction, few shell fragments, medium to coarse grained sand
-77.9	78.0	1	2	28	30	738-11A&B			-77.4 77.5
						RUN-13			71.9-74.5ft: rod drop *(continued)*
-81.8	81.9								LIMESTONE, boundstone, white (2.5Y8/1), soft to hard, friable to indurated, possible interbedded sand layers
-83.1	83.2	24	41	50/0.3	91/0.8	738-12			81.9ft: hard, moderately indurated to indurated
						RUN-14			83.2ft: soft to hard, friable to indurated
-86.8	86.9								
-87.2	87.3	50/0.4			50/0.4	738-13			86.9ft: hard, indurated
						RUN-15			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								-101.1 100.9ft: hard, indurated 101.2
		50/0.3			50/0.3	738-14			Boring Terminated at Elevation -101.1 ft

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

MACTEC

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	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) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS
										Begin Coring @ 18.7 ft
-18.6	18.7	3.2	0:44 0:05 0:34	(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)* 18.7ft: soft to moderately hard, friable to moderately indurate, trace locally interconnected vugs
-21.8	21.9	5.0	1:10/0.2 0:54 1:03	(2.1) 42%	(1.8) 36%	RUN-2				-24.4 — 24.5
-26.8	26.9		0:59 1:14 1:24				(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)
-31.8	31.9	5.0	1:52 0:52 1:18 1:24 1:14	(3.6) 72%	(2.5) 50%	RUN-3				
-36.8	36.9	5.0	0:55 2:08 2:20 2:45 2:38	(2.7) 54%	(1.8) 36%	RUN-4				31.9ft: moderate hard, moderately indurated, soft friable zones, trace medium to coarse grained sand
-41.8	41.9	5.0	0:18 0:59 0:29 0:09 0:43	(1.5) 30%	(0.0) 0%	RUN-5				36.9ft: few vugs 39.4 to 41.1ft: possible interbedded sand layers; based on drilling rates and recovery
-46.8	46.9	5.0	0:30 1:10 1:15 1:13 2:06	(2.8) 56%	(2.3) 46%	RUN-6				41.9ft: hard, indurated
-51.8	51.9	5.0	1:42 1:25 1:27 1:58 1:13	(3.8) 76%	(3.3) 66%	RUN-7				46.9ft: white (2.5Y8/1), and gray (2.5Y6/1), moderately hard, moderately indurated -49.3 — 49.4
							(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)
-56.8	56.9	5.0	0:52 1:05 0:46 0:22 0:15	(3.6) 72%	(3.6) 72%	RUN-8				
-61.8	61.9	5.0	0:43 1:03 0:51 0:54 1:09	(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
-62.3	62.4	2.2	N=50/.5 0:32/0.5	(1.2) 55%	(1.0) 45%	738-8 RUN-10				Below 61.9ft: Alternate sampling methods between SPT and coring 61.9ft: moderately indurated
-64.5	64.6	2.3	1:05 4:24/0.7	(0.3) 13%	(0.0) 0%	RUN-11				62.4ft: indurated, few medium to coarse grained sand -65.9 — 66.0
-66.8	66.9		0:22/0.3 0:23 0:09			738-9	(0.0) 0%	(NA)		66.9ft: POORLY GRADED SAND (SP), light gray (10YR7/1), medium dense, wet, strong HCl reaction, few shell fragments
-68.3	68.4	3.5	N=25 0:16/0.5	(1.0) 29%	(0.4) 11%	RUN-12				-69.9 — 70.0
-71.8	71.9		0:27 0:32 0:12				(1.0) 53%	(0.4) 21%		68.4ft: LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated -71.8 — 71.9
			N=0			738-10	(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 71.9-74.5ft: rod drop
			N=30			738-11A&B				-77.4 — 77.5
-77.9	78.0	3.9	0:40/0.9 0:16 0:15	(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
-81.8	81.9		0:47 N=91/0.8			738-12				81.9ft: hard, moderately indurated to indurated
-83.1	83.2	3.7	0.37/0.7 0:13 0:17	(1.1) 30%	(0.0) 0%	RUN-14				83.2ft: soft to hard, friable to indurated
-86.8	86.9		0:44 N=50/0.4			738-13				86.9ft: hard, indurated
-87.2	87.3	4.6	0:57/0.6 0:50 0:54	(1.5) 33%	(0.0) 0%	RUN-15				87.9ft: soft to hard, friable to indurated
-91.8	91.9	4.2	0:41 1.03 0:27	(2.4)	(1.3)	RUN-16				91.9ft: little vugs, few shell molds and casts

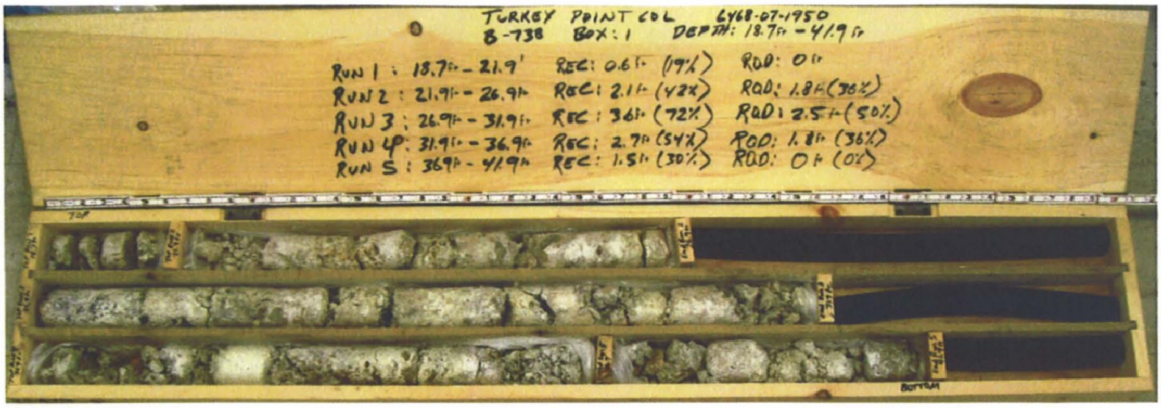
TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 7.10.08

MACTEC

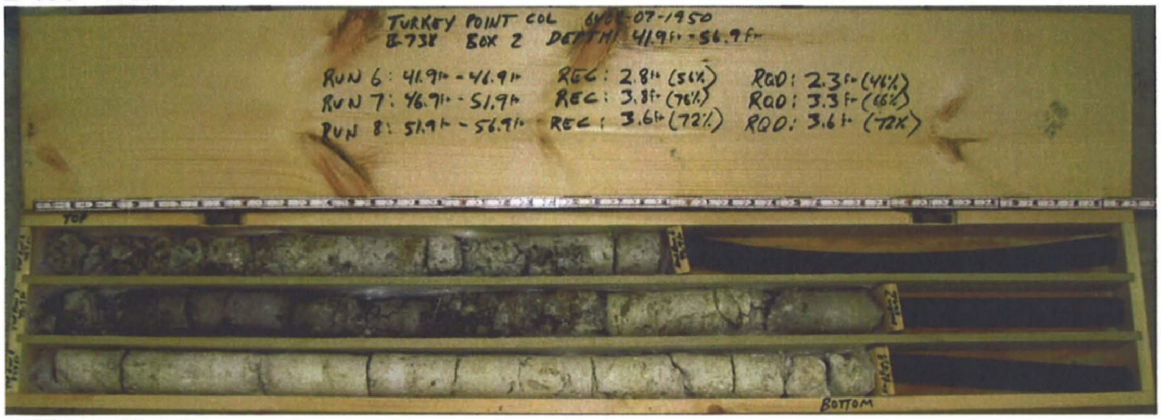
BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: S. Lehman
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-45C (RAL)	DRILLER: D. Rhodes/ K. Guy	GROUND WATER (ft)
BORING NO.: B-738	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: 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	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) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS
										Continued from previous page
-96.0	96.1		0:32 0:29 0:10	57%	31%					LIMESTONE, boundstone, white (2.5Y8/1), soft to hard, friable to indurated, possible interbedded sand layers *(continued)*
		4.8	0:59/0.2	(1.8) 38%	(0.0) 0%	RUN-17				
-100.8	100.9		0:34/0.8 0:41 0:40 1:02 1:40							-100.8 100.9ft: hard, indurated 100.9 Coring Terminated at Elevation -100.8

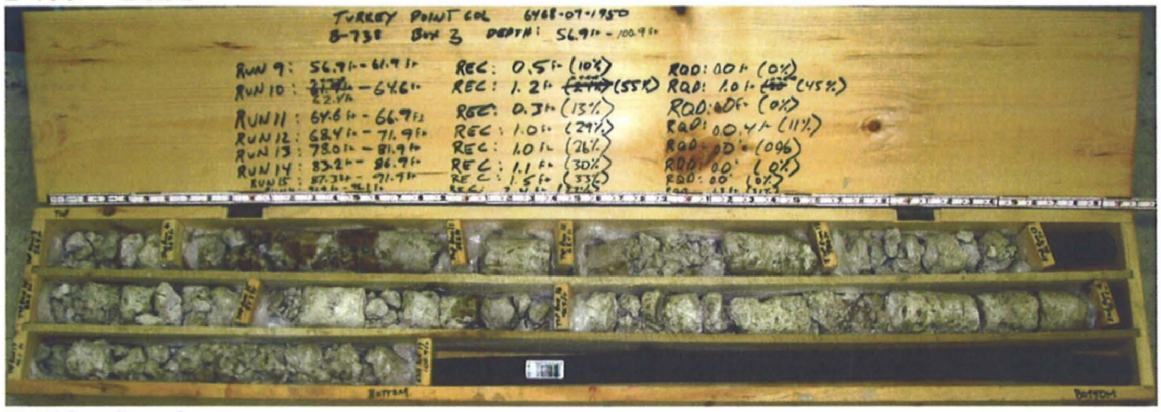
TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 7/10/08



B-738 – Box 1



B-738 – Box 2



B-738 – Box 3

MACTEC

GEOTECHNICAL BORING LOG

Prepared By [illegible] Date 7-10-08
Checked By [illegible] Date 7-10-08

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-739	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.6 ft (NAVD88)	NORTHING: 396,963 US ft (NAD83/90)	EASTING: 876,150 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 101.0 ft	BORING DIAMETER: 4" to 31.0', 3" to 101.0'	CASING DEPTH: 4" to 31.0'	HAMMER (ID):140 lb. Auto (07)
DATE STARTED: 2/22/08	COMPLETED: 2/24/08	CORE SIZE: HQ3	BITS USED: 2 15/16" Tricone

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
-1.6					Ground Surface				-1.6 0.0
-1.6 / -4.1	0.0 / 2.5	WOH	WOH	WOH	WOH 0	739-1			MUCK, light brownish gray (2.5Y6/2), to dark grayish brown (10YR4/2), very soft, wet, strong HCl reaction, mostly organic
		WOH	8	50/0.3	58/0.8	739-2			-4.6 3.0 LIMESTONE, boundstone, white (5Y8/1), hard, friable, strong HCl reaction, oolitic (Miami Formation)
-7.1	5.5				SEE LEGEND FOR ROCK HARDNESS CRITERIA BASED ON SPT DATA				5.5ft: very soft
-8.9	7.3	5	9	7	16	739-3			7.3ft: soft
		14	16	7	23	739-4			
-11.5	9.9								
		5	3	4	7	739-5			9.9ft: very soft, some coarse grained sand, shell fragments
-14.0	12.4								
		15	10	7	17	739-6			
-17.2	15.6								
-18.0	16.4	18	50/0.3		68/0.8	739-7 / RUN-1			15.6ft: hard 16.4ft: Switch sampling method to coring 16.4ft: indurated, fossiliferous, recrystallized calcite, little locally interconnected vugs, cemented sand and shell fragments
-22.4	20.8					RUN-2			20.8ft: soft and friable
-27.9	26.3								
		5	4	15	19	739-8			26.0ft: loss of circulation -29.6 26.3ft: Switch sampling method to SPT 28.0 26.3ft: very soft, some medium grained sand
-32.1	30.5								
-32.6	31.0	50/0.5			50/0.5	739-9 / RUN-3			LIMESTONE, boundstone, white (5Y8/1), wet, fossiliferous, strong HCl reaction (Upper Fort Thompson Formation) 30.5ft: hard 31.0ft: Switch sampling method to coring
-37.6	36.0					RUN-4			31.0ft: white (5Y8/1), to pale yellow (5Y8/3), moderately hard, indurated, some vugs, recrystallized calcite 36.0ft: white (5Y8/1), hard, few vugs
-42.6	41.0					RUN-5			41.0ft: coralline
-47.6	46.0					RUN-6			-48.6 46.0ft: light gray (5Y7/1) 47.0 LIMESTONE, boundstone, white, (5Y8/1), hard, indurated, few vugs, fossiliferous, strong HCl reaction, recrystallized calcite (Lower Fort Thompson Formation)
-52.6	51.0					RUN-7			
-57.6	56.0					RUN-8			
-62.6	61.0					RUN-9			
-67.6	66.0					RUN-10			66.0ft: little vugs
-72.6	71.0					RUN-11			71.0ft: moderately hard, moderately indurated

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

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-739	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.6 ft (NAVD88)	NORTHING: 396,963 US ft (NAD83/90)	EASTING: 876,150 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 101.0 ft	BORING DIAMETER: 4" to 31.0', 3" to 101.0'	CASING DEPTH: 4" to 31.0'	HAMMER (ID):140 lb. Auto (07)
DATE STARTED: 2/22/08	COMPLETED: 2/24/08	CORE SIZE: HQ3	BITS USED: 2 15/16" Tricone

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
-76.4					Continued from previous page				
-77.6	76.0								LIMESTONE, boundstone, white, (5Y8/1), hard, indurated, few vugs, fossiliferous, strong HCl reaction, recrystallized calcite (Lower Fort Thompson Formation) *(continued)*
						RUN-12			76.0ft: medium hard to moderately hard
-82.6	81.0								
						RUN-13			81.0ft: hard, moderately indurated to indurated, few vugs
-87.6	86.0								
						RUN-14			86.0ft: indurated
-92.6	91.0								
						RUN-15			
-97.6	96.0								
						RUN-16			
									-102.6 101.0
									Boring Terminated at Elevation -102.6 ft

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

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-739	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.6 ft (NAVD88)	NORTHING: 396,963 US ft (NAD83/90)	EASTING: 876,150 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 101.0 ft	CASING DEPTH: 4" to 31.0'		HAMMER (ID): 140 lb. Auto (07)
DATE STARTED: 2/22/08	COMPLETED: 2/24/08	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 @ 16.4 ft
-18.0	16.4	4.4	3:26 4:12 2:34 0:22 0:29/0.4	(3.1) 70%	(2.6) 59%	RUN-1	(3.1) 33%	(2.6) 28%		LIMESTONE, boundstone, white (5Y8/1), hard, friable, strong HCl reaction, oolitic (Miami Formation) *(continued)* 16.4ft: indurated, fossiliferous, recrystallized calcite, little locally interconnected vugs, cemented sand and shell fragments
-22.4	20.8	5.0	0:25 0:24 1:57 0:18 0:19	(0.0) 0%	(0.0) 0%	RUN-2				20.8ft: soft and friable
-27.4	25.8		*N=19*			*739-8*				
							(10.6) 66%	(7.1) 44%		-29.6 26.0ft: loss of circulation 26.3ft: Switch sampling method to SPT 26.3ft: very soft, some medium grained sand 28.0
-32.6	31.0	5.0	*N=50/0.5* 1:03 0:59 0:47 1:51 3:15	(1.2) 24%	(0.0) 0%	*739-9* RUN-3				LIMESTONE, boundstone, white (5Y8/1), wet, fossiliferous, strong HCl reaction (Upper Fort Thompson Formation) 30.5ft: hard 31.0ft: Switch sampling method to coring 31.0ft: white (5Y8/1), to pale yellow (5Y8/3), moderately hard, indurated, some vugs, recrystallized calcite
-37.6	36.0	5.0	1:42 1:23 1:37 1:28 1:55	(3.7) 74%	(1.4) 28%	RUN-4				36.0ft: white (5Y8/1), hard, few vugs
-42.6	41.0	5.0	1:00 1:25 1:43 2:52 2:23	(4.7) 94%	(4.7) 94%	RUN-5				41.0ft: coralline
-47.6	46.0	5.0	1:48 1:22 5:59 1:25 1:34	(5.0) 100%	(5.0) 100%	RUN-6	(37.1) 69%	(25.7) 48%		-48.6 46.0ft: light gray (5Y7/1) 47.0 LIMESTONE, boundstone, white, (5Y8/1), hard, indurated, few vugs, fossiliferous, strong HCl reaction, recrystallized calcite (Lower Fort Thompson Formation)
-52.6	51.0	5.0	1:11 1:10 0:23 0:42 0:23	(4.2) 84%	(3.6) 72%	RUN-7				
-57.6	56.0	5.0	0:31 0:22 0:15 0:45 1:10	(2.2) 44%	(0.8) 16%	RUN-8				
-62.6	61.0	5.0	0:48 1:04 0:56 0:26 0:53	(5.0) 100%	(4.3) 86%	RUN-9				
-67.6	66.0	5.0	0:35 0:21 0:18 0:28 1:55	(2.2) 44%	(1.2) 24%	RUN-10				66.0ft: little vugs
-72.6	71.0	5.0	0:28 0:39 1:48 1:49 1:24	(3.4) 68%	(1.8) 36%	RUN-11				71.0ft: moderately hard, moderately indurated
-77.6	76.0	5.0	0:31 0:45 1:03 0:46 0:56	(3.4) 68%	(2.8) 56%	RUN-12				76.0ft: medium hard to moderately hard
-82.6	81.0	5.0	0:57 0:50 1:45 0:39 0:43	(2.5) 50%	(2.0) 40%	RUN-13				81.0ft: hard, moderately indurated to indurated, few vugs
-87.6	86.0	5.0	0:26 0:47 0:33 0:30 0:59	(2.8) 56%	(1.5) 30%	RUN-14				86.0ft: indurated
-92.6	91.0									

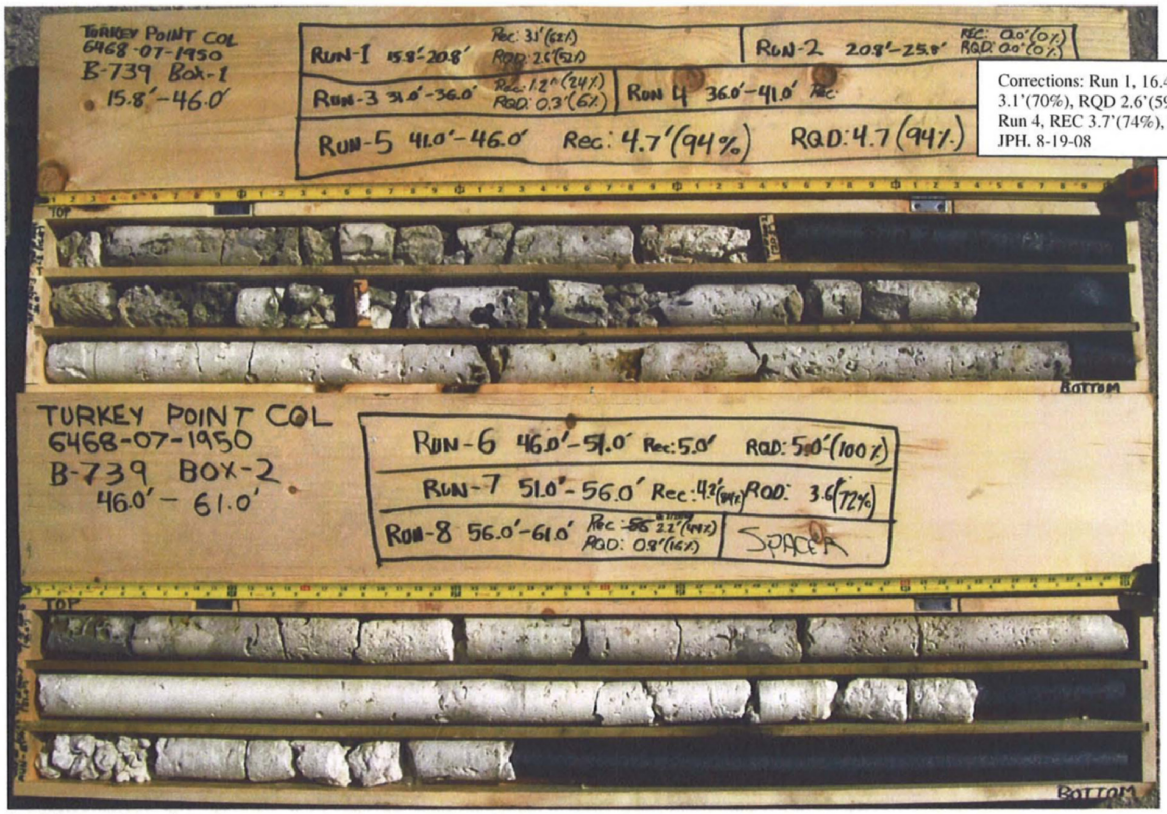
TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 7/10/08

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-739	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.6 ft (NAVD88)	NORTHING: 396,963 US ft (NAD83/90)	EASTING: 876,150 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 101.0 ft	CASING DEPTH: 4" to 31.0'		HAMMER (ID): 140 lb. Auto (07)
DATE STARTED: 2/22/08	COMPLETED: 2/24/08	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
		5.0	0:33 0:26 0:20 0:31 0:33	(4.8) 96%	(2.8) 56%	RUN-15				LIMESTONE, boundstone, white, (5Y8/1), hard, indurated, few vugs, fossiliferous, strong HCl reaction, recrystallized calcite (Lower Fort Thompson Formation) *(continued)*
-97.6	96.0									
		5.0	0:31 1:04 0:40 0:39 0:37	(2.6) 52%	(0.9) 18%	RUN-16				
-102.6	101.0									-102.6 101.0
										Coring Terminated at Elevation -102.6

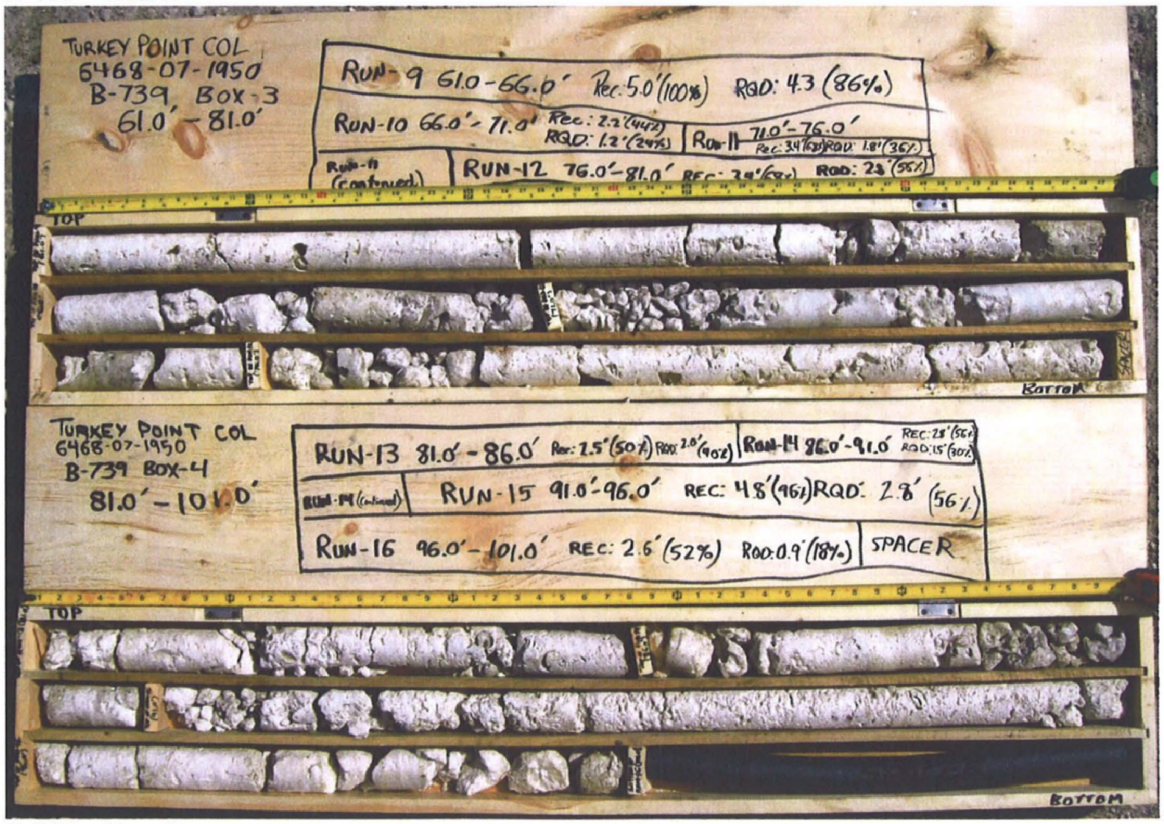
TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 7/10/08



Corrections: Run 1, 16.4-20.8', REC 3.1'(70%), RQD 2.6'(59%)
Run 4, REC 3.7'(74%), RQD 1.4'(28%)
JPH, 8-19-08

B-739 – Box 1

B-739 – Box 2



B-739 – Box 3

B-739 – Box 4

MACTEC

GEOTECHNICAL BORING LOG

Prepared By JPH Date 8-14-08
Checked By SJL Date 8/19/08

BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: H. Lyatuu
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-550 Marsh Buggy	DRILLER: D. White/ R. Hall	GROUND WATER (ft)
BORING NO.: B-802	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.5 ft (NAVD88)	NORTHING: 398,817 US ft (NAD83/90)	EASTING: 876,266 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 128.5 ft	BORING DIAMETER: 6" to 35.0', 4" to 128.5'	CASING DEPTH: 6" to 35.0'	HAMMER (ID):140 lb. Auto (893)
DATE STARTED: 4/23/08	COMPLETED: 5/2/08	CORE SIZE: PQ3	BITS USED: 3 15/16" Tricone

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
-1.5					Ground Surface				-1.5 / 0.0
-1.5 / -4.0	0.0 / 2.5	WOH	WOH	WOH	WOH 0	802-1			Sandy FAT CLAY (CH), light gray (10YR7/2), very soft, wet, some fine grained sand, trace organics, strong HCl reaction (-3.5 / 2.0; -4.8 / 3.3)
-6.5	5.0	WOH	5	16	21	802-A&B			MUCK, dark gray (10YR4/1), to light gray (10YR7/2), very soft, moist, fine grained sand, trace shell fragments, strong HCl reaction
-9.0	7.5	9	9	7	16	802-3			SEE LEGEND FOR ROCK HARDNESS CRITERIA BASED ON SPT DATA
-11.5	10.0	5	19	12	31	802-4			LIMESTONE, boundstone, white (10YR8/1), soft, wet, fossiliferous, strong HCl reaction, oolitic (Miami Formation)
-14.0	12.5	5	10	11	21	802-5			5.0ft: white (7/5YR8/1), very soft; 7.5ft: white (10YR8/1), medium hard
-16.5	15.0	8	10	22	32	802-6			10.0ft: soft; 12.5ft: medium hard
-21.5	20.0	6	10	14	24	802-7			15.0ft: soft
-26.0	24.5	18	28	50/0.4	78/0.9	802-8			20.0ft: hard
-30.7	29.2	6	6	10	16	802-9			24.5ft: very soft; -28.5 / 27.0
-35.7	34.2	5	6	14	20	802-10			LIMESTONE, boundstone, white (10YR8/1), soft, wet, fossiliferous, strong HCl reaction (Fort Thompson Formation)
-38.5	37.0	33	38	50/0.3	88/0.8	802-11			34.2ft: hard
-43.5	42.0					RUN-1			37.0ft: Alternate sampling method between coring and SPT
-45.0	43.5	4	11	38	49	802-12			42.0ft: moderately hard
-48.5	47.0					RUN-2			43.5ft: medium hard, moderately indurated, few vugs, fossiliferous, recrystallized calcite, little sand
-50.0	48.5	7	9	23	32	802-13			47.0ft: friable
-53.5	52.0					RUN-3			
-55.0	53.5	7	17	47	64	802-14			52.0ft: hard
-58.5	57.0					RUN-4			
-60.0	58.5	5	11	7	18	802-15			57.0ft: very soft
-63.5	62.0					RUN-5			58.5ft: moderately hard to medium hard, moderately indurated, little vugs, trace fine grained sand
-68.5	67.0					RUN-6			62.0ft: medium hard, few vugs
-73.5	72.0					RUN-7			67.0ft: little vugs, coralline
						RUN-8			72.0ft: trace vugs

TURKEY POINT COL BORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 8/14/08

MACTEC

BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: H. Lyatuu
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-550 Marsh Buggy	DRILLER: D. White/ R. Hall	GROUND WATER (ft)
BORING NO.: B-802	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.5 ft (NAVD88)	NORTHING: 398,817 US ft (NAD83/90)	EASTING: 876,266 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 128.5 ft	BORING DIAMETER: 6" to 35.0', 4" to 128.5'	CASING DEPTH: 6" to 35.0'	HAMMER (ID):140 lb. Auto (893)
DATE STARTED: 4/23/08	COMPLETED: 5/2/08	CORE SIZE: PQ3	BITS USED: 3 15/16" Tricone

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
-76.3					Continued from previous page				
-78.5	77.0								LIMESTONE, boundstone, white (10YR8/1), soft, wet, fossiliferous, strong HCl reaction (Fort Thompson Formation) *(continued)*
-80.0	78.5	9	42	49	91	802-16 RUN-9			77.0ft: hard 78.5ft: medium hard
-83.5	82.0								
-84.0	82.5	50/0.5			50/0.5	802-17 RUN-10			82.0ft: hard 82.5 to 83.0ft: silty sand, then LIMESTONE, medium hard, few vugs
-88.5	87.0					RUN-11			87.0 to 89.0ft: silty sand, greenish gray (5BG6/1), dense wet calcareous, trace shell fragments, strong HCl reaction
-93.5	92.0					RUN-12			89.0ft: LIMESTONE, boundstone, white (10YR8/1), medium hard, interbedded soft friable limestone, moderately indurated, trace vugs, fossiliferous, strong HCl reaction
-98.5	97.0								
-100.0	98.5	16	28	42	70	802-18A&B RUN-13			97.0ft: hard, little fine grained sand 98.5ft: soft to moderately hard, friable to moderately indurated, trace vugs, little shell casts, trace fine grained sand
-103.5	102.0					RUN-14			102.0ft: soft to medium hard, few vugs, most shell casts
-108.5	107.0					RUN-15			107.0ft: little vugs
-113.5	112.0					RUN-16			112.0ft: gray (10YR7/2), medium hard to soft, moderately indurated to friable, trace vugs, little fine grained sand
-116.5									115.0
-118.5	117.0	5	10	14	24	802-19			Silty SAND (SM), light gray (5Y7/2), medium dense, wet, fine grained sand, trace cemented sand, weak HCl reaction (Tamiami Formation)
-128.5	127.0	6	8	7	15	802-20			
-130.0									127.0ft: light greenish gray (10Y7/1) 128.5 Boring Terminated at Elevation -130.0 ft

TURKEY POINT COL BORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 8/14/08