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-812	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.4 ft (NAVD88)	NORTHING: 398,913 US ft (NAD83/90)	EASTING: 875,043 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 128.7 ft	BORING DIAMETER: 4" to 128.7'	CASING DEPTH: 4" to 35.0'	HAMMER (ID):140 lb. Auto (893)
DATE STARTED: 4/19/08	COMPLETED: 4/22/08	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
-76.2					Continued from previous page				
-78.6	77.2					RUN-10			73.7ft: medium hard LIMESTONE, boundstone, white (10YR8/1), moderately hard, moderately indurated, few vugs, fossiliferous, strong HCl reaction (Lower Fort Thompson Formation) *(continued)*
-83.6	82.2								
-83.8	82.4	50/.2			50/.2	812-14 RUN-11			82.2ft: hard 82.4ft: medium hard
-88.6	87.2					RUN-12			87.2ft: soft to moderately hard, friable to moderately indurated, sandy
-93.6	92.2					RUN-13			
-98.6	97.2					RUN-14			97.2ft: medium hard, moderately indurated
-103.6	102.2					RUN-15			102.2ft: soft to moderately hard, friable to moderately indurated
-108.6	107.2					RUN-16			107.2ft: medium hard, moderately indurated
-113.6	112.2					RUN-17			-114.4 113.0
-118.6	117.2	5	7	12	19	812-15			Silty SAND (SM), light gray (7.5YR7/1), medium dense, wet, fine grained sand, weak HCl reaction (Tamiami Formation)
-128.6	127.2	4	4	3	7	812-16			-130.1 127.2ft: very pale brown (10YR7/3), loose 128.7
									Boring Terminated at Elevation -130.1 ft

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

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-812	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.4 ft (NAVD88)	NORTHING: 398,913 US ft (NAD83/90)	EASTING: 875,043 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 128.7 ft	CASING DEPTH: 4" to 35.0'		HAMMER (ID): 140 lb. Auto (893)
DATE STARTED: 4/19/08	COMPLETED: 4/22/08	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 @ 34.2 ft
-35.6	34.2	3.0	1:52 1:16 1:11	(1.9) 63%	(0.9) 30%	RUN-1	(12.5) 82%	(5.8) 38%		LIMESTONE, boundstone, white (10YR8/1), hard, wet, trace shell fragments, trace coralline, strong HCl reaction (Upper Fort Thompson Formation) *(continued)*
-38.6	37.2									34.2ft: indurated, few vugs, fossiliferous
		5.0	1:10 0:31 1:12 0:53 0:34	(3.5) 70%	(1.4) 28%	RUN-2				37.2ft: white (10YR8/1), to pale olive (5Y6/3), hard to medium hard, indurated to moderately indurated
-43.6	42.2									
		5.0	1:28 0:57 1:06 1:45 1:44	(4.9) 98%	(3.1) 62%	RUN-3				42.2ft: gray (5YR6/1), to white (10YR8/1), hard, indurated, coralline
-48.6	47.2									
		5.0	1:30 3:50 2:20 1:30 0:50	(3.5) 70%	(1.2) 24%	RUN-4				47.2ft: white (10YR8/1) and gray (5Y6/1) to 49.4ft
-53.6	52.2						(20.9) 33%	(6.2) 10%		-50.8 49.4 LIMESTONE, boundstone, white (10YR8/1), moderately hard, moderately indurated, few vugs, fossiliferous, strong HCl reaction (Lower Fort Thompson Formation)
		5.0	0:35 0:15 0:27 0:31 0:54	(1.7) 34%	(0.4) 8%	RUN-5				52.2ft: medium hard 52.2 to 87.2ft: possible interbedded sand layers; based on recovery and drilling rates
-58.6	57.2									
		5.0	1:10 0:45 0:30 0:15 0:54	(0.3) 6%	(0.0) 0%	RUN-6				57.2ft: moderately hard, trace vugs
-63.6	62.2									
			N=7			*812-12*				62.2ft: Alternate sampling method between coring and SPT
-65.1	63.7	3.5	0:20 0:25 0:26 0:20/0.5	(0.6) 17%	(0.0) 0%	RUN-7				62.2ft: very soft 63.7ft: medium hard, moderately indurated
-68.6	67.2									
		5.0	0:17 0:27 0:32 0:55 0:23	(0.6) 12%	(0.0) 0%	RUN-8				
-73.6	72.2									
			N=2			*812-13*				72.2ft: very soft
-75.1	73.7	3.5	0:53 1:40 1:37 0:50/0.5	(0.9) 26%	(0.0) 0%	RUN-9				73.7ft: medium hard
-78.6	77.2									
		5.0	0:44 0:44 0:49 1:09 0:48	(1.0) 20%	(0.0) 0%	RUN-10				
-83.6	82.2									
-83.8	82.4	4.8	*N=50/.2* 0:51 0:33 0:06 0:30 1:03/0.8	(2.4) 50%	(0.9) 19%	*812-14* RUN-11				82.2ft: hard 82.4ft: medium hard
-88.6	87.2									
		5.0	1:20 1:08 1:05 0:30 0:41	(3.3) 66%	(2.8) 56%	RUN-12				87.2ft: soft to moderately hard, friable to moderately indurated, sandy
-93.6	92.2									
		5.0	0:40 0:23 0:12 0:10 0:15	(1.9) 38%	(0.8) 16%	RUN-13				
-98.6	97.2									
		5.0	0:12 0:30 0:25 0:38 0:40	(1.4) 28%	(0.0) 0%	RUN-14				97.2ft: medium hard, moderately indurated
-103.6	102.2									
		5.0	0:38 0:32 0:17 0:45 0:38	(3.0) 60%	(0.5) 10%	RUN-15				102.2ft: soft to moderately hard, friable to moderately indurated
-108.6	107.2									
		5.0	0:30 0:25	(1.8)	(0.0)	RUN-16				107.2ft: medium hard, moderately indurated

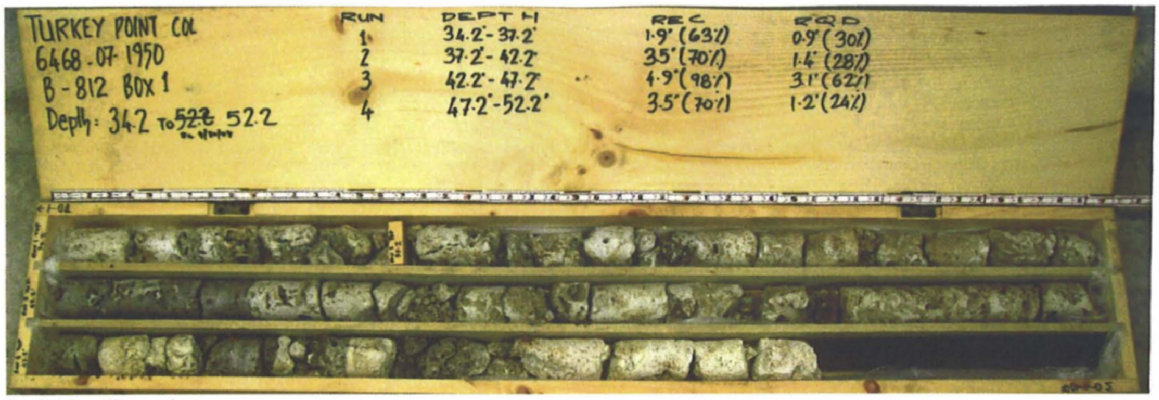
TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 5/30/08

MACTEC

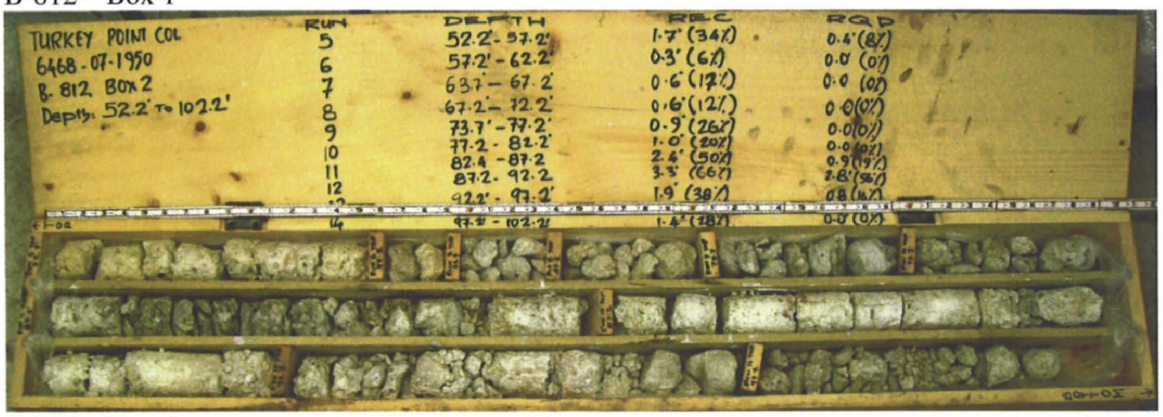
BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: H. Lyatuu
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-550 Marsh Buggy	DRILLER: D. White/ R. Hall	GROUND WATER (ft)
BORING NO.: B-812	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.4 ft (NAVD88)	NORTHING: 398,913 US ft (NAD83/90)	EASTING: 875,043 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 128.7 ft	CASING DEPTH: 4" to 35.0'		HAMMER (ID): 140 lb. Auto (893)
DATE STARTED: 4/19/08	COMPLETED: 4/22/08	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
-113.6	112.2		0:20 0:30 0:25	36%	0%					LIMESTONE, boundstone, white (10YR8/1), moderately hard, moderately indurated, few vugs, fossiliferous, strong HCl reaction (Lower Fort Thompson Formation) *(continued)* -114.4 113.0
-118.6	117.2	5.0	0:40 0:30 0:30 0:20 0:20	(0.7) 14%	(0.0) 0%	RUN-17	(0.0) 0%	(NA)		Silty SAND (SM), light gray (7.5YR7/1), medium dense, wet, fine grained sand, weak HCl reaction (Tamiami Formation) -118.6 117.2
										Coring Terminated at Elevation -118.6

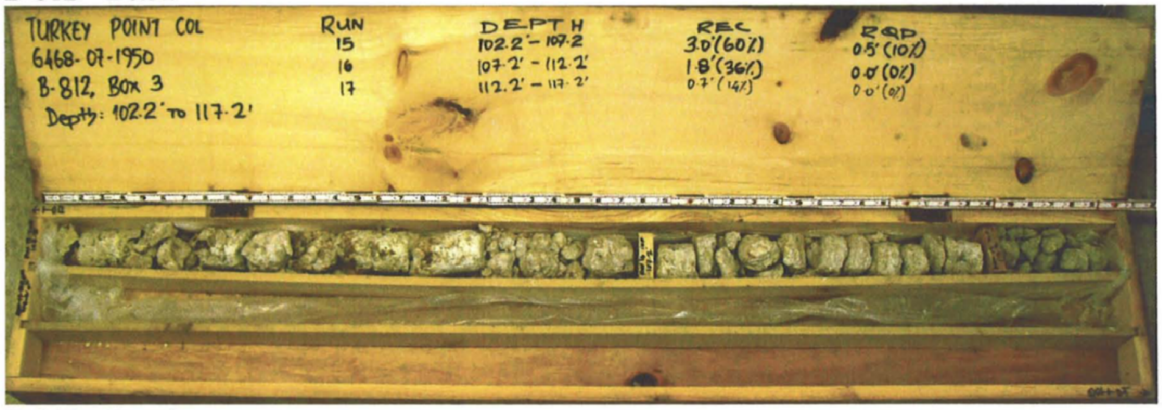
TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 5/30/08



B-812 – Box 1



B-812 – Box 2



B-812 - Box 3

MACTEC

GEOTECHNICAL BORING LOG

Prepared By JPH Date 5-30-08
Checked By RJM Date 5-30-08

SHEET 1 OF 2

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-813	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.3 ft (NAVD88)	NORTHING: 399,048 US ft (NAD83/90)	EASTING: 876,097 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 126.5 ft	BORING DIAMETER: 6" to 126.5'	CASING DEPTH: 6" to 15.0'	HAMMER (ID):140 lb. Auto (893)
DATE STARTED: 5/13/08	COMPLETED: 5/15/08	CORE SIZE: PQ3	BITS USED: 5 7/8" 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
-1.3					Ground Surface				-1.3 0.0
-1.3 / -3.8	0.0 / 2.5	WOH	WOH	WOH	WOH 0	813-1			Sandy FAT CLAY (CH), dark gray (10YR5/1), to gray (10YR6/1), very soft, wet, some sand, trace shell fragments, fine grained sand, trace shells, strong HCl reaction -3.3 2.0
-6.3	5.0	WOH	WOH	10	10	813-2			-4.8 3.5 MUCK, very dark gray (10YR3/1), very soft, wet, trace shell fragments, mostly organic, weak HCl reaction
-8.8	7.5	9	14	9	23	813-3			SEE LEGEND FOR ROCK HARDNESS CRITERIA BASED ON SPT DATA
-11.3	10.0	6	8	17	25	813-4			LIMESTONE, boundstone, white (10YR8/1), very soft, wet, sandy, strong HCl reaction, fossiliferous, oolitic (Miami Formation)
-13.8	12.5	3	7	5	12	813-5			5.0ft: soft
-16.3	15.0	12	9	9	18	813-6			10.0ft: very soft
-21.3	20.0	10	11	12	23	813-7			15.0ft: white (7.5YR8/1), soft, recrystallized calcite, trace fine grained sand
-26.3	25.0	4	3	3	6	813-8			20.0ft: white (2.5Y8/1), very soft
-31.3	30.0	16	6	26	32	813-9			25.0ft: medium hard, trace cemented sand
-32.8	31.5	26	28	50/0.1	78/0.6	813-10			-29.3 28.0 LIMESTONE, boundstone, white (2.5Y8/1), hard, wet, fossiliferous, strong HCl reaction (Upper Fort Thompson Formation)
-34.3	33.0					RUN-1			31.5ft: Switch sampling method to coring
-39.3	38.0					RUN-2			31.5ft: moderately hard to hard, moderately indurated to indurated, few vugs, coralline 33.0ft: white (10YR8/1), hard, indurated, little vugs
-44.3	43.0					RUN-3			38.0ft: few vugs
-49.3	48.0					RUN-4			43.0ft: little vugs
-54.3	53.0					RUN-5			48.0ft: white (10YR8/1), to gray (10YR6/1) from 52.5 to 53.0ft, medium hard to hard, moderately indurated to indurated, few vugs
-59.3	58.0					RUN-6			-54.3 53.0 LIMESTONE, boundstone, white (10YR8/1), medium hard, moderately indurated, few vugs, fossiliferous, trace cemented sand, strong HCl reaction (Lower Fort Thompson Formation)
-64.3	63.0					RUN-7			58.0ft: medium hard to moderately hard, moderately indurated to indurated
-69.3	68.0					RUN-8			63.0ft: moderately hard, moderately indurated, trace fine grained sand
-74.3	73.0					RUN-9			68.0ft: medium hard
						RUN-10			

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

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-813	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.3 ft (NAVD88)	NORTHING: 399,048 US ft (NAD83/90)	EASTING: 876,097 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 126.5 ft	BORING DIAMETER: 6" to 126.5'	CASING DEPTH: 6" to 15.0'	HAMMER (ID):140 lb. Auto (893)
DATE STARTED: 5/13/08	COMPLETED: 5/15/08	CORE SIZE: PQ3	BITS USED: 5 7/8" 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
-76.1					Continued from previous page				
-79.3	78.0					RUN-11			LIMESTONE, boundstone, white (10YR8/1), medium hard, moderately indurated, few vugs, fossiliferous, trace cemented sand, strong HCl reaction (Lower Fort Thompson Formation) *(continued)* 78.0ft: hard, indurated
-84.3	83.0					RUN-12			83.0ft: moderately hard, moderately indurated, few shell molds and casts
-89.3	88.0					RUN-13			88.0ft: medium hard
-94.3	93.0					RUN-14			
-99.3	98.0					RUN-15			
-104.3	103.0					RUN-16			103.0ft: moderately hard, mostly shell molds and casts
-109.3	108.0					RUN-17			108.0ft: moderately hard to medium hard
-114.3	113.0					RUN-18			113.0ft: medium hard, few shell molds and casts
-117.3	116.0					RUN-19			-118.3 116.0ft: trace vugs 117.0
-119.3	118.0					RUN-20			Silty SAND (SM), greenish gray (10Y6/1), medium dense, wet, fine grained sand, strong HCl reaction (Tamiami Formation)
-126.3	125.0	7	7	11	18	813-11			-127.8 125.0ft: Switch sampling method to SPT 126.5
									Boring Terminated at Elevation -127.8 ft

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

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-813	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.3 ft (NAVD88)	NORTHING: 399,048 US ft (NAD83/90)	EASTING: 876,097 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 126.5 ft	CASING DEPTH: 6" to 15.0'		HAMMER (ID): 140 lb. Auto (893)
DATE STARTED: 5/13/08	COMPLETED: 5/15/08	CORE SIZE: PQ3	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 @ 31.5 ft
-32.8	31.5	1.5	1:35	(1.5) 100%	(1.0) 67%	RUN-1	(21.5) 100%	(19.0) 88%		LIMESTONE, boundstone, white (2.5Y8/1), hard, wet, fossiliferous, strong HCl reaction (Upper Fort Thompson Formation) *(continued)*
-34.3	33.0	5.0	0:42/0.5			RUN-2				31.5ft: moderately hard to hard, moderately indurated to indurated, few vugs, coralline
			1:46 1:34 2:02 3:20 2:58	(5.0) 100%	(3.9) 78%					33.0ft: white (10YR8/1), hard, indurated, little vugs
-39.3	38.0									
		5.0	1:33 1:58 1:59 2:15 2:47	(5.0) 100%	(5.0) 100%	RUN-3				38.0ft: few vugs
-44.3	43.0									
		5.0	1:48 1:44 2:09 2:05 2:00	(5.0) 100%	(4.9) 98%	RUN-4				43.0ft: little vugs
-49.3	48.0									
		5.0	1:34 0:30 0:57 0:50 1:18	(5.0) 100%	(4.2) 84%	RUN-5				48.0ft: white (10YR8/1), to gray (10YR6/1) from 52.5 to 53.0ft, medium hard to hard, moderately indurated to indurated, few vugs
-54.3	53.0									-54.3 53.0
		5.0	1:04 0:48 0:52 0:28 1:04	(4.7) 94%	(2.9) 58%	RUN-6	(52.4) 82%	(26.5) 41%		LIMESTONE, boundstone, white (10YR8/1), medium hard, moderately indurated, few vugs, fossiliferous, trace cemented sand, strong HCl reaction (Lower Fort Thompson Formation)
-59.3	58.0									
		5.0	0:30 1:02 1:50 3:00 2:18	(4.2) 84%	(2.7) 54%	RUN-7				58.0ft: medium hard to moderately hard, moderately indurated to indurated
-64.3	63.0									
		5.0	1:03 0:10 0:11 0:15 0:41	(1.7) 34%	(0.7) 14%	RUN-8				63.0ft: moderately hard, moderately indurated, trace fine grained sand
-69.3	68.0									
		5.0	0:53 0:42 0:50 1:23 1:50	(3.4) 68%	(1.4) 28%	RUN-9				68.0ft: medium hard
-74.3	73.0									
		5.0	1:58 3:00 4:15 1:58 3:03	(3.1) 62%	(1.3) 26%	RUN-10				
-79.3	78.0									
		5.0	1:30 1:07 2:00 1:51 1:26	(5.0) 100%	(5.0) 100%	RUN-11				78.0ft: hard, indurated
-84.3	83.0									
		5.0	1:55 0:24 0:43 1:22 2:01	(4.7) 94%	(1.8) 36%	RUN-12				83.0ft: moderately hard, moderately indurated, few shell molds and casts
-89.3	88.0									
		5.0	1:35 1:03 1:09 0:45 1:02	(5.0) 100%	(1.5) 30%	RUN-13				88.0ft: medium hard
-94.3	93.0									
		5.0	0:37 0:27 1:07 0:57 0:27	(4.3) 86%	(2.0) 40%	RUN-14				
-99.3	98.0									
		5.0	0:15 0:45 0:40 0:55 0:43	(4.1) 82%	(1.3) 26%	RUN-15				
-104.3	103.0									
		5.0	0:45 0:30 0:35	(4.5) 90%	(3.0) 60%	RUN-16				103.0ft: moderately hard, mostly shell molds and casts

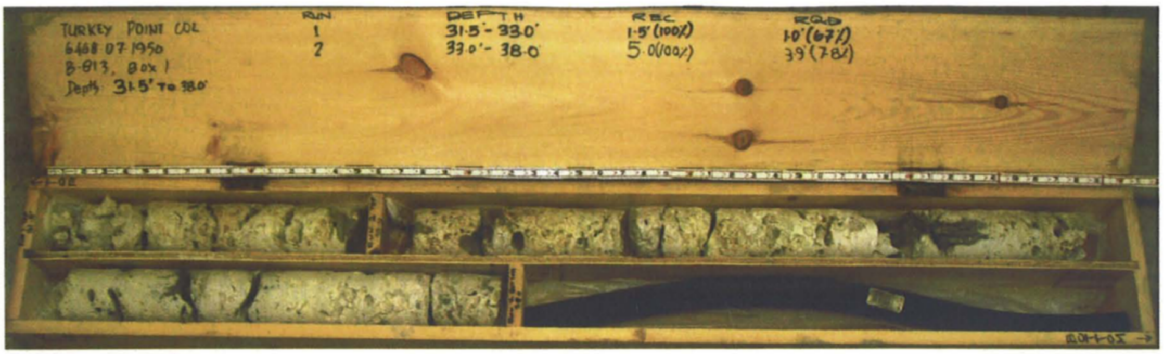
TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 5-30-08

MACTEC

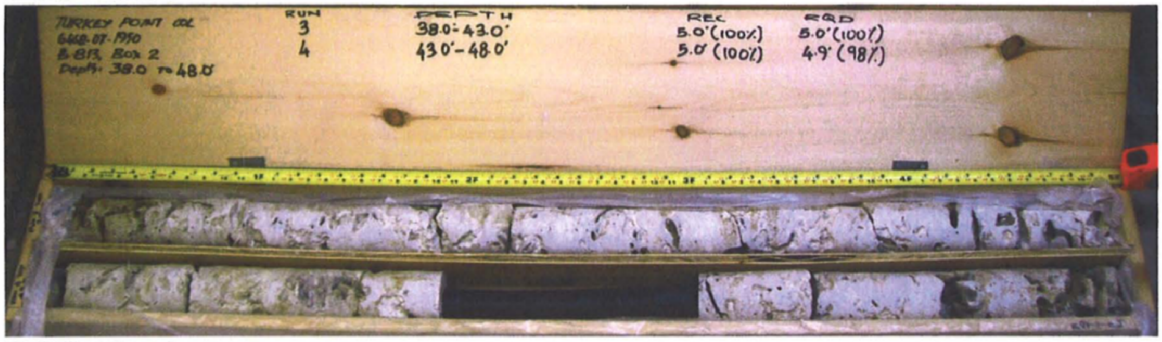
BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: H. Lyatuu
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-550 Marsh Buggy	DRILLER: D. White/ R. Hall	GROUND WATER (ft)
BORING NO.: B-813	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.3 ft (NAVD88)	NORTHING: 399,048 US ft (NAD83/90)	EASTING: 876,097 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 126.5 ft	CASING DEPTH: 6" to 15.0'		HAMMER (ID): 140 lb. Auto (893)
DATE STARTED: 5/13/08	COMPLETED: 5/15/08	CORE SIZE: PQ3	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
-109.3	108.0		0:47 0:37							LIMESTONE, boundstone, white (10YR8/1), medium hard, moderately indurated, few vugs, fossiliferous, trace cemented sand, strong HCl reaction (Lower Fort Thompson Formation) *(continued)* 108.0ft: moderately hard to medium hard
-114.3	113.0	5.0	0:30 0:50 0:30 0:40 1:00	(4.5) 90%	(2.5) 50%	RUN-17				
-117.3	116.0	3.0	0:33 0:21 0:50	(2.7) 90%	(0.4) 13%	RUN-18				113.0ft: medium hard, few shell molds and casts
-119.3	118.0	2.0	1:08 0:48	(0.5) 25%	(0.0) 0%	RUN-19				-118.3 116.0ft: trace vugs 117.0
-124.3	123.0	5.0	0:29 0:23 0:29 0:16 0:31	(0.0) 0%	(0.0) 0%	RUN-20	(0.0) 0%	(NA)		Silty SAND (SM), greenish gray (10Y6/1), medium dense, wet, fine grained sand, strong HCl reaction (Tamiami Formation) -124.3 123.0
										Coring Terminated at Elevation -124.3

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

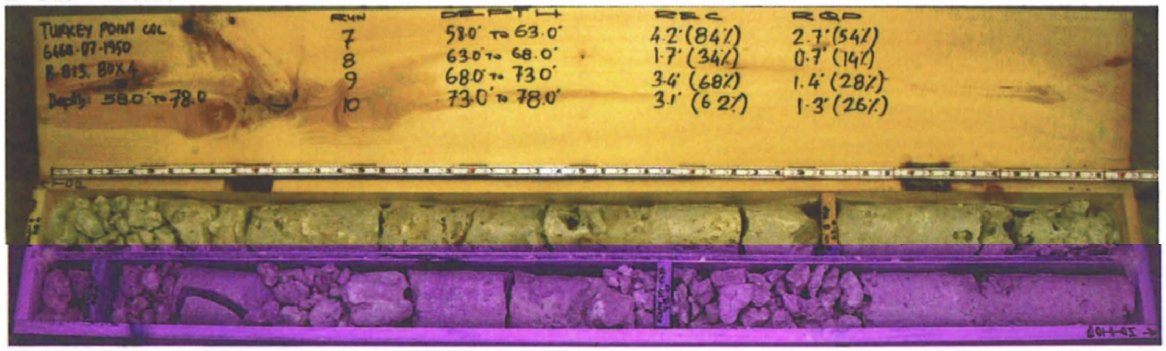


B-813 – Box 1



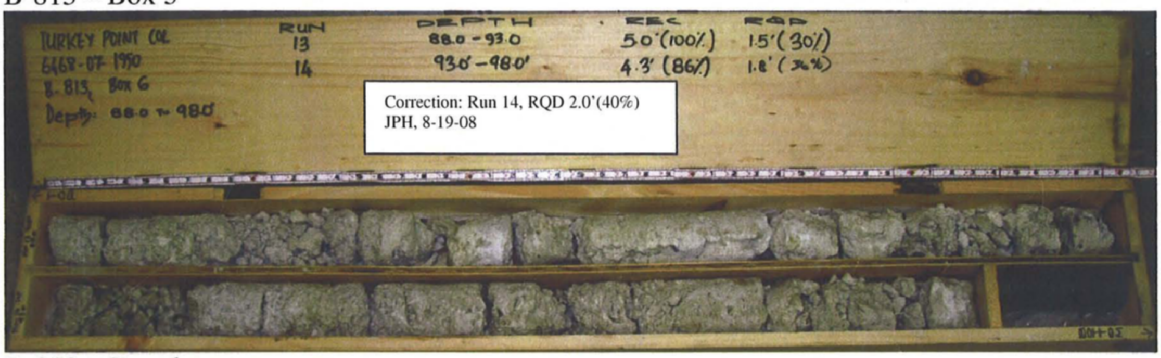
B-813 – Box 2

B-813 – Box 3



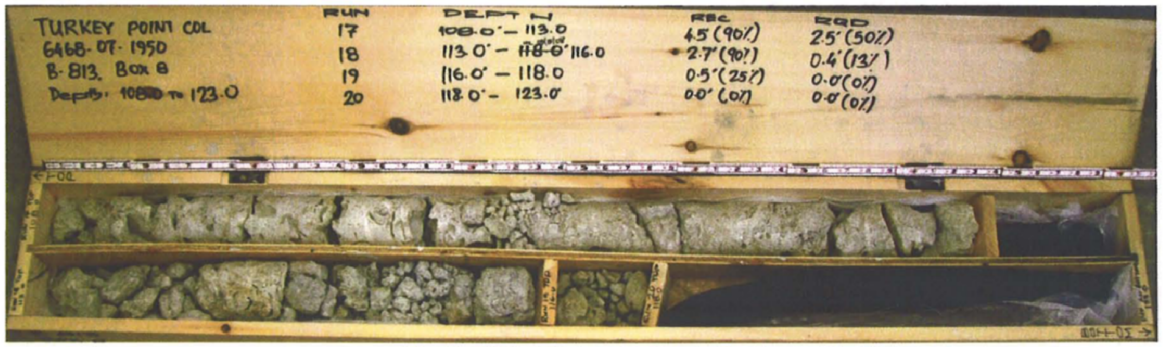
B-813 – Box 4

B-813 – Box 5



B-813 – Box 6

B-813 – Box 7



B-813 – Box 8

MACTEC

GEOTECHNICAL BORING LOG

Prepared By [signature] Date 5-30-08
Checked By [signature] Date 5-30-08

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/ C. White	GROUND WATER (ft)
BORING NO.: B-814	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: 9.0 ft (NAVD88)	NORTHING: 399,139 US ft (NAD83/90)	EASTING: 877,405 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 153.2 ft	BORING DIAMETER: 4" to 98.0', 3" to 153.2'	CASING DEPTH: 4" to 98.0'	HAMMER (ID):140 lb. Auto (M06)
DATE STARTED: 5/15/08	COMPLETED: 5/18/08	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
9.0					Ground Surface				9.0 / 0.0
9.0	0.0	7	5	2	7	814-1			POORLY GRADED SAND with gravel (SP), pale yellow (2.5Y8/2), dry, loose, some calcareous nodules, fine to medium grained sand, strong HCl reaction, limestone gravel (Spoil Material)
6.3	2.7	1	2	2	4	814-2			4.5 / 4.5
4.3	4.7	3	2	1	3	814-3			2.7ft: light gray (2.5Y7/2), very loose, medium grained sand
2.1	6.9	4	4	4	8	814-4			POORLY GRADED GRAVEL (GP), pale yellow (2.5Y8/2), very loose, wet, trace fine grained sand, strong HCl reaction, limestone fragments (Spoil Material)
-0.7	9.7	6	1	1	2	814-5			-3.2 / 12.2
-3.2	12.2	1	WOR	WOR	0 WOR	814-6			6.9ft: loose 9.7ft: very loose
-6.1	15.1	3	6	16	22	814-7			-6.1 / 15.1 MUCK, black (2.5Y2.5/1), very soft, wet, strong HCl reaction, mostly organic
-13.1	22.1	8	18	12	30	814-8			-9.0 / 18.0 POORLY GRADED SAND with gravel (SP), pale yellow (2.5Y8/2), medium dense, wet, fine grained sand, strong HCl reaction, limestone fragments (Miami Formation) LIMESTONE, boundstone, light gray (2.5Y7/2), soft, wet, little sand, strong HCl reaction, oolitic
-18.8	27.8	9	1	9	10	814-9			27.8ft: white (2.5Y8/1), very soft
-23.4	32.4	3	2	1	3	814-10			-22.0 / 31.0 POORLY GRADED SAND (SP), white (2.5Y8/1), very loose, wet, oolitic, coarse grained sand, some fine gravel-sized limestone fragments, strong HCl reaction
-28.7	37.7	3	7	8	15	814-11			37.7ft: medium dense, fine to coarse grained sand
-33.7	42.7								-31.0 / 40.0 LIMESTONE, boundstone, pale yellow (2.5Y8/2), hard, wet, some coarse grained sand, strong HCl (Upper Fort Thompson Formation)
-34.1	43.1	50/0.4			50/0.4	814-12 RUN-1			43.1ft: Switch sampling method to coring 43.1ft: medium hard to moderately hard, friable to moderately indurated, trace vugs
-37.1	46.1					RUN-2			
-42.1	51.1					RUN-3			51.5ft: moderately hard to hard, moderately indurated to indurated
-47.1	56.1					RUN-4			56.1ft: few vugs, recrystallized calcite
-52.1	61.1					RUN-5			-52.1 / 61.1 LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, trace vugs, recrystallized calcite, strong HCl reaction (Lower Fort Thompson Formation)
-57.1	66.1					RUN-6			
-62.1	71.1					RUN-7			71.1ft: few fine grained sand, few vugs

SEE LEGEND FOR ROCK HARDNESS CRITERIA BASED ON SPT DATA

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

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/ C. White	GROUND WATER (ft)
BORING NO.: B-814	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: 9.0 ft (NAVD88)	NORTHING: 399,139 US ft (NAD83/90)	EASTING: 877,405 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 153.2 ft	BORING DIAMETER: 4" to 98.0', 3" to 153.2'	CASING DEPTH: 4" to 98.0'	HAMMER (ID):140 lb. Auto (M06)
DATE STARTED: 5/15/08	COMPLETED: 5/18/08	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
-65.8					Continued from previous page				
-67.1	76.1					RUN-8			LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, trace vugs, recrystallized calcite, strong HCl reaction (Lower Fort Thompson Formation) *(continued)* 76.1ft: moderately hard to hard, moderately indurated to indurated, trace vugs
-72.1	81.1					RUN-9			77.0 to 99.0ft: interbedded sand layers 81.0ft: hard, indurated, some sand
-77.1	86.1								
-78.6	87.6	WOH	WOH	WOH	0 WOH	814-13			86.1ft: Switch sampling method to SPT 86.1ft: interbedded sand, very loose, fine grained sand, wet, strong HCl reaction 87.6ft: Switch sampling method to coring 87.6 to 88.1ft: rod drop 88.1ft: moderately hard, moderately indurated
						RUN-10			
-82.1	91.1					RUN-11			
-87.1	96.1								
		49	24	46	70	814-14			96.1ft: Switch sampling method SPT 96.1 to 99.0ft: POORLY GRADED SAND (SP), fine to coarse grained
-92.9	101.9								
		50/0.5			50/0.5	814-15			101.9ft: LIMESTONE, hard, some sand
-102.7	111.7								
		7	21	9	30	814-16			111.7ft: soft
-112.7	121.7								
		23	20	13	33	814-17			121.7ft: moderately hard
									-117.0 — 126.0 POORLY GRADED SAND (SP), pale yellow (5Y7/4), medium dense, wet, fine grained sand, trace limestone fragments, strong HCl reaction (Tamiami Formation)
-122.7	131.7								
		11	7	10	17	814-18			
-132.7	141.7								
		7	7	9	16	814-19			141.1ft: greenish gray (10Y5/1)

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