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								Silty SAND (SM), light gray (7.5YR7/1), medium dense, wet, fine grained sand, weak HCl reaction (Tamiami Formation)
-118.6	117.2	5	7	12	19	812-15			
-128.6	127.2	4	4	3	7	812-16			
-130.1	128.7								127.2ft: very pale brown (10YR7/3), loose 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	5.0	1:10 0:31 1:12 0:53 0:34	(3.5) 70%	(1.4) 28%	RUN-2				34.2ft: indurated, few vugs, fossiliferous 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
-50.8	49.4									
-53.6	52.2	5.0	0:35 0:15 0:27 0:31 0:54	(1.7) 34%	(0.4) 8%	RUN-5	(20.9) 33%	(6.2) 10%		LIMESTONE, boundstone, white (10YR8/1), moderately hard, moderately indurated, few vugs, fossiliferous, strong HCl reaction (Lower Fort Thompson Formation) 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 62.2ft: very soft
-65.1	63.7	3.5	0:20 0:25 0:26	(0.6) 17%	(0.0) 0%	RUN-7				63.7ft: medium hard, moderately indurated
-68.6	67.2	5.0	0:20/0.5 0:17 0:27 0:32 0:55	(0.6) 12%	(0.0) 0%	RUN-8				
-73.6	72.2		0:23 *N=2*			*812-13*				72.2ft: very soft
-75.1	73.7	3.5	0:53 1:40 1:37	(0.9) 26%	(0.0) 0%	RUN-9				73.7ft: medium hard
-78.6	77.2	5.0	0:50/0.5 0:44 0:44 0:49 1:09	(1.0) 20%	(0.0) 0%	RUN-10				
-83.6	82.2		0:48							
-83.8	82.4	4.8	*N=50/.2* 0:51 0:33 0:06 0:30	(2.4) 50%	(0.9) 19%	*812-14* RUN-11				82.2ft: hard 82.4ft: medium hard
-88.6	87.2	5.0	1:03/0.8 1:20 1:08 1:05 0:30	(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	0:41 0:40 0:23 0:12 0:10	(1.9) 38%	(0.8) 16%	RUN-13				
-98.6	97.2	5.0	0:15 0:12 0:30 0:25 0:38	(1.4) 28%	(0.0) 0%	RUN-14				97.2ft: medium hard, moderately indurated
-103.6	102.2	5.0	0:40 0:38 0:32 0:17 0:45	(3.0) 60%	(0.5) 10%	RUN-15				102.2ft: soft to moderately hard, friable to moderately indurated
-108.6	107.2	5.0	0:38 0:30 0.25	(1.8)	(0.0)	RUN-16				107.2ft: medium hard, moderately indurated

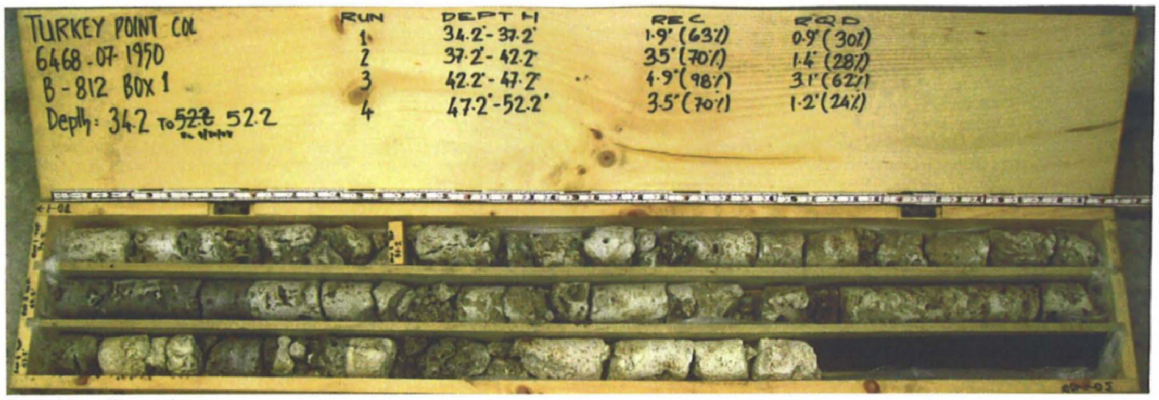
TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 5/30/08

MACTEC

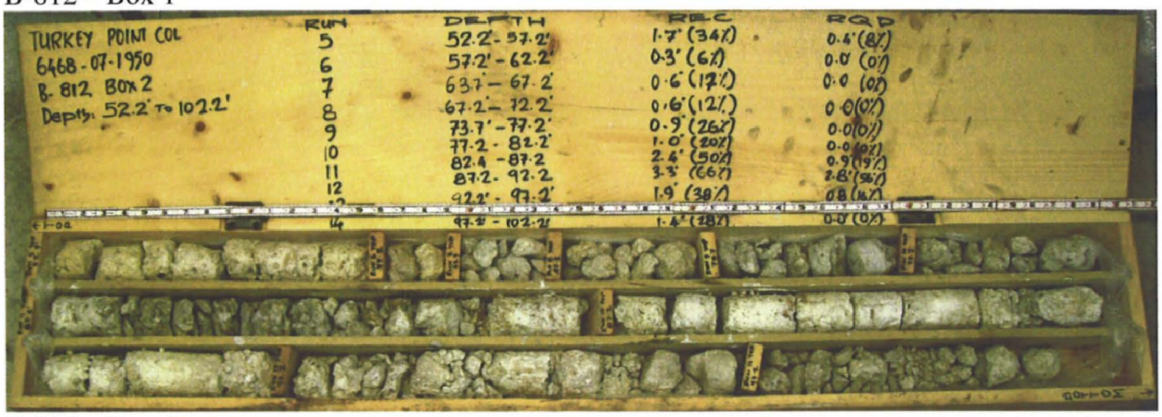
BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: H. Lyatuu
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-550 Marsh Buggy	DRILLER: D. White/ R. Hall	GROUND WATER (ft)
BORING NO.: B-812	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND 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
		5.0	0:40 0:30 0:30 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		0:20							117.2
-118.6										Coring Terminated at Elevation -118.6

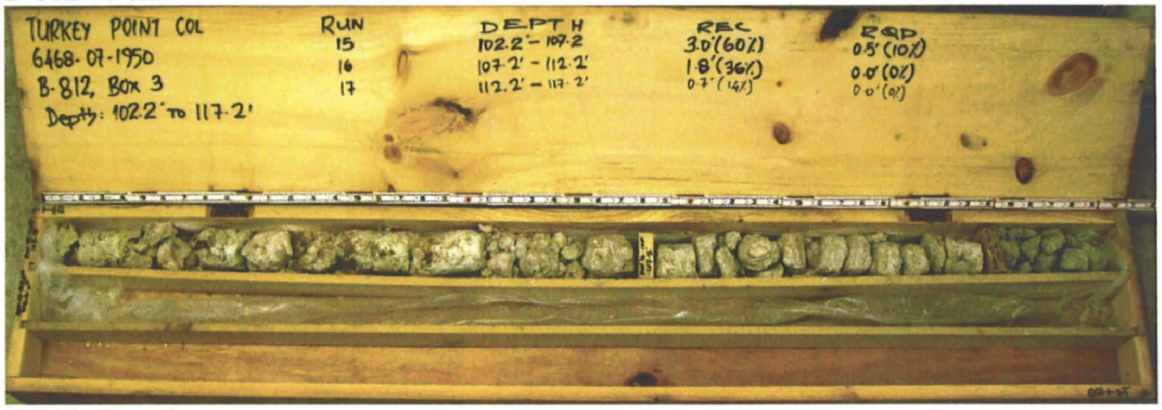
TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 5/30/08



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	0.0	WOH	WOH	WOH	WOH 0	813-1			Sandy FAT CLAY (CH), dark gray (10YR5/1),
-3.8	2.5								-3.3 to gray (10YR6/1), very soft, wet, some sand, 2.0
		WOH	WOH	10	10	813-2			-4.8 trace shell fragments, fine grained sand, trace 3.5
-6.3	5.0				SEE LEGEND FOR ROCK HARDNESS CRITERIA BASED ON SPT DATA				shells, strong HCl reaction
		9	14	9	23	813-3			MUCK, very dark gray (10YR3/1), very soft,
-8.8	7.5								wet, trace shell fragments, mostly organic,
		6	8	17	25	813-4			weak HCl reaction
-11.3	10.0								LIMESTONE, boundstone, white (10YR8/1),
		3	7	5	12	813-5			very soft, wet, sandy, strong HCl reaction.
-13.8	12.5								fossiliferous, oolitic (Miami Formation)
		12	9	9	18	813-6			5.0ft: soft
-16.3	15.0								10.0ft: very soft
		10	11	12	23	813-7			15.0ft: white (7.5YR8/1), soft, recrystallized
									calcite, trace fine grained sand
-21.3	20.0								
		4	3	3	6	813-8			20.0ft: white (2.5Y8/1), very soft
-26.3	25.0								
		16	6	26	32	813-9			25.0ft: medium hard, trace cemented sand
-31.3	30.0								-29.3 28.0
-32.8	31.5	26	28	50/0.1	78/0.6	813-10			LIMESTONE, boundstone, white (2.5Y8/1),
-34.3	33.0					RUN-1			hard, wet, fossiliferous, strong HCl reaction
						RUN-2			(Upper Fort Thompson Formation)
									31.5ft: Switch sampling method to coring
-39.3	38.0								31.5ft: moderately hard to hard, moderately
						RUN-3			indurated to indurated, few vugs, coralline
-44.3	43.0								33.0ft: white (10YR8/1), hard, indurated, little
						RUN-4			vugs
-49.3	48.0								38.0ft: few vugs
						RUN-5			43.0ft: little vugs
-54.3	53.0								48.0ft: white (10YR8/1), to gray (10YR6/1) from
						RUN-6			52.5 to 53.0ft, medium hard to hard,
-59.3	58.0								moderately indurated to indurated, few vugs
						RUN-7			-54.3 53.0
-64.3	63.0								LIMESTONE, boundstone, white (10YR8/1),
						RUN-8			medium hard, moderately indurated, few vugs,
-69.3	68.0								fossiliferous, trace cemented sand, strong HCl
						RUN-9			reaction (Lower Fort Thompson Formation)
-74.3	73.0								58.0ft: medium hard to moderately hard,
						RUN-10			moderately indurated to indurated
									63.0ft: moderately hard, moderately indurated,
									trace fine grained sand
									68.0ft: medium hard

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)	(1.0)	RUN-1	(21.5)	(19.0)		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	100%	67%	RUN-2	100%	88%		31.5ft: moderately hard to hard, moderately indurated to indurated, few vugs, coralline
			1:46	(5.0)	(3.9)					33.0ft: white (10YR8/1), hard, indurated, little vugs
			1:34	100%	78%					
			2:02							
			3:20							
-39.3	38.0		2:58							
		5.0	1:33	(5.0)	(5.0)	RUN-3				38.0ft: few vugs
			1:58	100%	100%					
			1:59							
			2:15							
-44.3	43.0		2:47							
		5.0	1:48	(5.0)	(4.9)	RUN-4				43.0ft: little vugs
			1:44	100%	98%					
			2:09							
			2:05							
-49.3	48.0		2:00							
		5.0	1:34	(5.0)	(4.2)	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
			0:30	100%	84%					
			0:57							
			0:50							
-54.3	53.0		1:18							-54.3 53.0
		5.0	1:04	(4.7)	(2.9)	RUN-6	(52.4)	(26.5)		LIMESTONE, boundstone, white (10YR8/1), medium hard, moderately indurated, few vugs, fossiliferous, trace cemented sand, strong HCl reaction (Lower Fort Thompson Formation)
			0:48	94%	58%		82%	41%		
			0:52							
			0:28							
-59.3	58.0		1:04							
		5.0	0:30	(4.2)	(2.7)	RUN-7				58.0ft: medium hard to moderately hard, moderately indurated to indurated
			1:02	84%	54%					
			1:50							
			3:00							
-64.3	63.0		2:18							
		5.0	1:03	(1.7)	(0.7)	RUN-8				63.0ft: moderately hard, moderately indurated, trace fine grained sand
			0:10	34%	14%					
			0:11							
			0:15							
-69.3	68.0		0:41							
		5.0	0:53	(3.4)	(1.4)	RUN-9				68.0ft: medium hard
			0:42	68%	28%					
			0:50							
			1:23							
-74.3	73.0		1:50							
		5.0	1:58	(3.1)	(1.3)	RUN-10				
			3:00	62%	26%					
			4:15							
			1:58							
-79.3	78.0		3:03							
		5.0	1:30	(5.0)	(5.0)	RUN-11				78.0ft: hard, indurated
			1:07	100%	100%					
			2:00							
			1:51							
-84.3	83.0		1:26							
		5.0	1:55	(4.7)	(1.8)	RUN-12				83.0ft: moderately hard, moderately indurated, few shell molds and casts
			0:24	94%	36%					
			0:43							
			1:22							
-89.3	88.0		2:01							
		5.0	1:35	(5.0)	(1.5)	RUN-13				88.0ft: medium hard
			1:03	100%	30%					
			1:09							
			0:45							
-94.3	93.0		1:02							
		5.0	0:37	(4.3)	(2.0)	RUN-14				
			0:27	86%	40%					
			1:07							
			0:57							
-99.3	98.0		0:27							
		5.0	0:15	(4.1)	(1.3)	RUN-15				
			0:45	82%	26%					
			0:40							
			0:55							
-104.3	103.0		0:43							
		5.0	0:45	(4.5)	(3.0)	RUN-16				103.0ft: moderately hard, mostly shell molds and casts
			0:30	90%	60%					
			0:35							

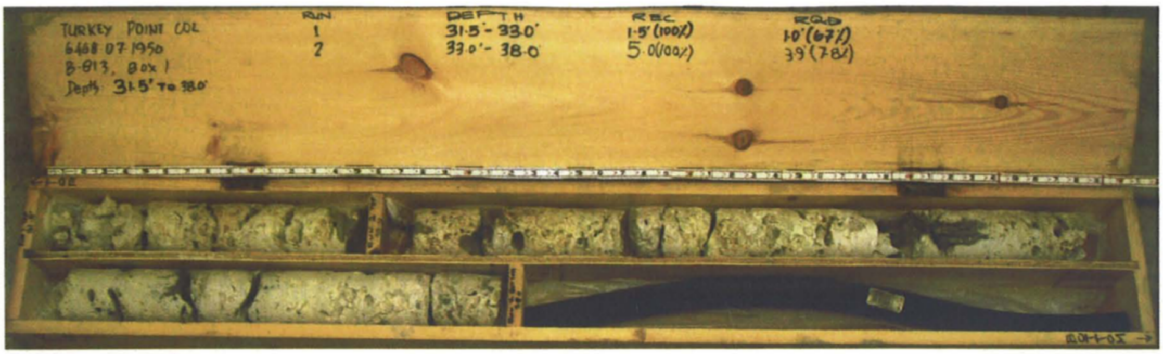
TURKEY POINT COL CORE TURKEY POINT GPJ TURKEY POINT COL.GDT 5/30/08

MACTEC

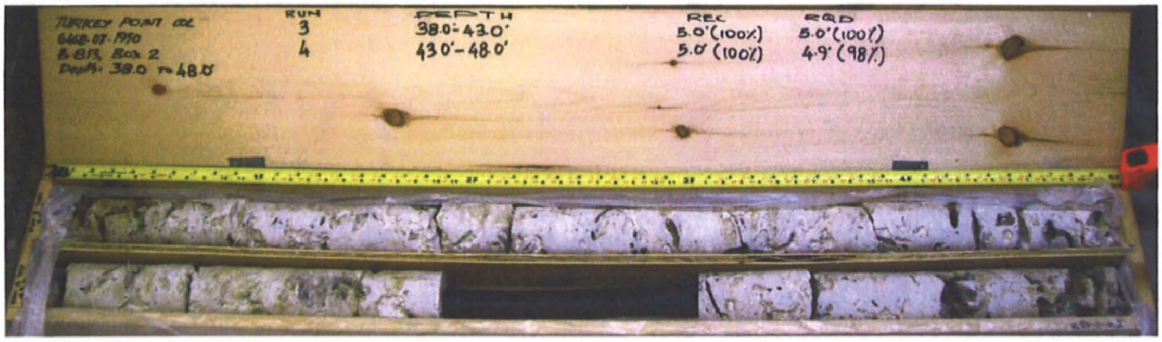
BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: H. Lyatuu
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-550 Marsh Buggy	DRILLER: D. White/ R. Hall	GROUND WATER (ft)
BORING NO.: B-813	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND 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)*
		5.0	0:30 0:50 0:30 0:40	(4.5) 90%	(2.5) 50%	RUN-17				108.0ft: moderately hard to medium hard
-114.3	113.0		1:00							
		3.0	0:33 0:21	(2.7) 90%	(0.4) 13%	RUN-18				113.0ft: medium hard, few shell molds and casts
-117.3	116.0		0:50							
		2.0	1:08	(0.5)	(0.0)	RUN-19				-118.3 116.0ft: trace vugs 117.0
-119.3	118.0		0:48	25%	0%		(0.0)	(NA)		Silty SAND (SM), greenish gray (10Y6/1), medium dense, wet, fine grained sand, strong HCl reaction (Tamiami Formation)
		5.0	0:29 0:23 0:29 0:16	(0.0) 0%	(0.0) 0%	RUN-20	0%			
-124.3	123.0		0:31							-124.3 123.0
										Coring Terminated at Elevation -124.3

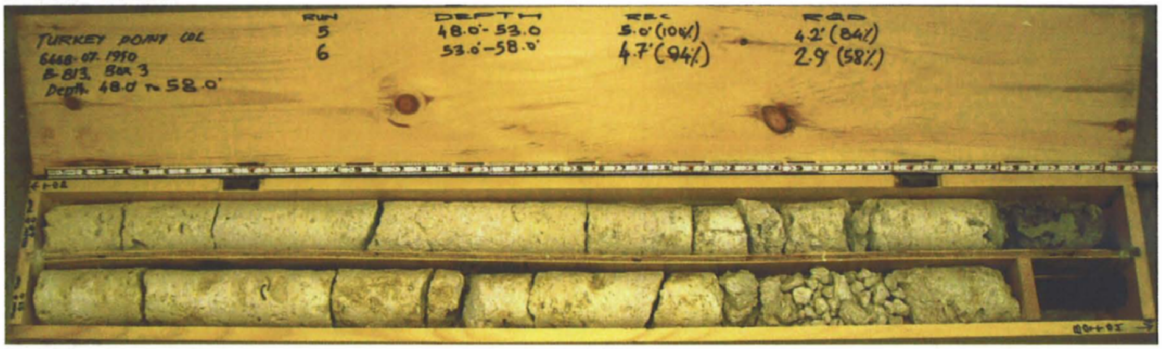
TURKEY POINT COL CORE TURKEY POINT GPJ TURKEY POINT COL.GDT 5/30/08



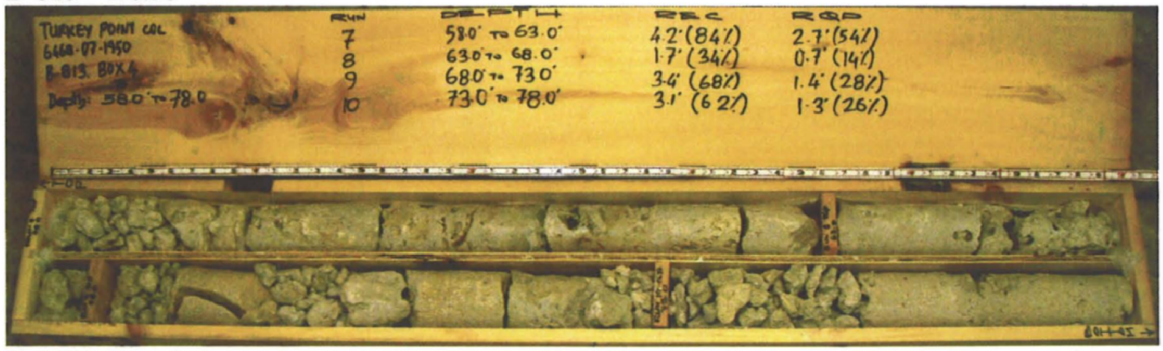
B-813 – Box 1



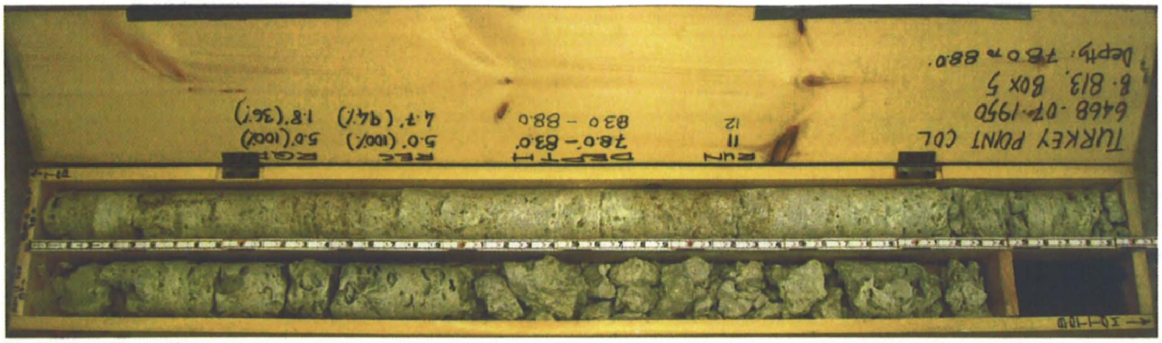
B-813 – Box 2



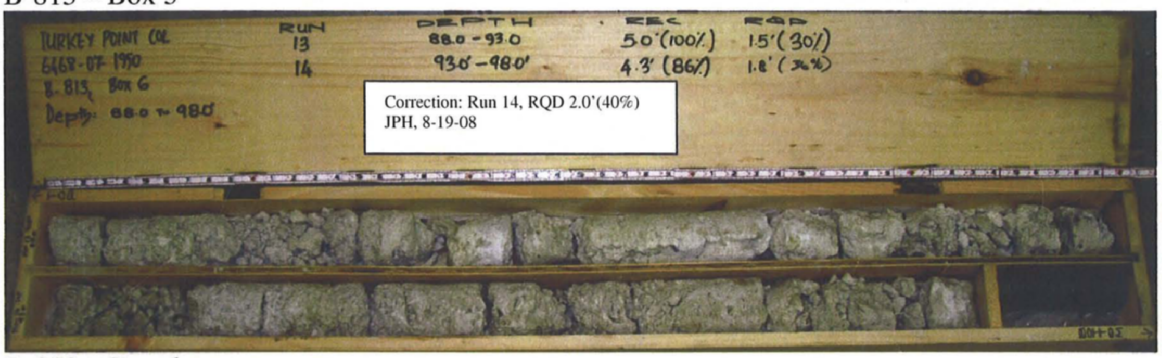
B-813 – Box 3



B-813 – Box 4

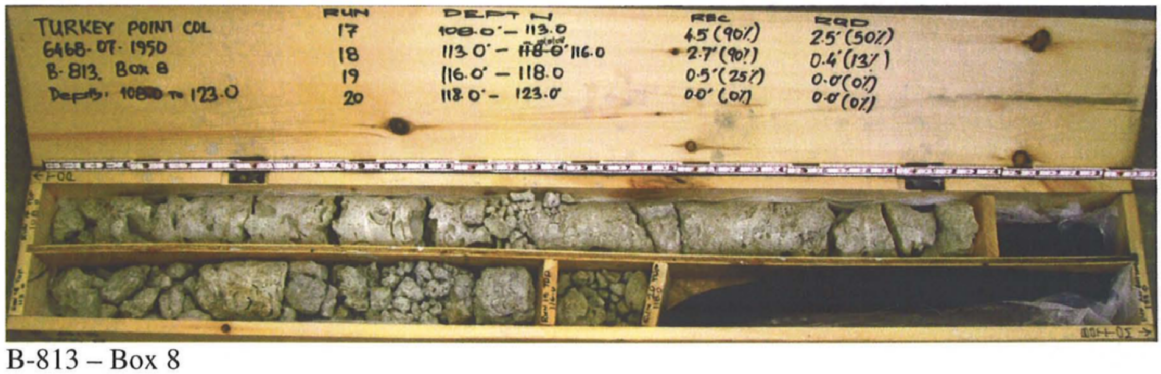


B-813 – Box 5



B-813 – Box 6

B-813 – Box 7



B-813 – Box 8

MACTEC

GEOTECHNICAL BORING LOG

Prepared By JPH Date 5-30-08

Checked By TMM Date 5-30-08

SHEET 1 OF 3

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	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			2.7ft: light gray (2.5Y7/2), very loose, medium grained sand
4.3	4.7	3	2	1	3	814-3			POORLY GRADED GRAVEL (GP), pale yellow (2.5Y8/2), very loose, wet, trace fine grained sand, strong HCl reaction, limestone fragments (Spoil Material)
2.1	6.9	4	4	4	8	814-4			6.9ft: loose
-0.7	9.7	6	1	1	2	814-5			9.7ft: very loose
-3.2	12.2	1	WOR	WOR	0 WOR	814-6			MUCK, black (2.5Y2.5/1), very soft, wet, strong HCl reaction, mostly organic
-6.1	15.1	3	6	16	22	814-7			POORLY GRADED SAND with gravel (SP), pale yellow (2.5Y8/2). medium dense, wet, fine grained sand, strong HCl reaction, limestone fragments (Miami Formation)
-9.0	18.0								LIMESTONE, boundstone, light gray (2.5Y7/2), soft, wet, little sand, strong HCl reaction, oolitic
-13.1	22.1	8	18	12	30	814-8			
-18.8	27.8	9	1	9	10	814-9			27.8ft: white (2.5Y8/1). very soft
-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
-23.4	32.4	3	2	1	3	814-10			
-28.7	37.7	3	7	8	15	814-11			37.7ft: medium dense, fine to coarse grained sand
-31.0	40.0								LIMESTONE, boundstone, pale yellow (2.5Y8/2), hard, wet. some coarse grained sand, strong HCl (Upper Fort Thompson Formation)
-33.7	42.7								43.1ft: Switch sampling method to coring
-34.1	43.1	50/0.4			50/0.4	814-12 RUN-1			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			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)*
-72.1	81.1					RUN-9			76.1ft: moderately hard to hard, moderately indurated to indurated, trace vugs 77.0 to 99.0ft: interbedded sand layers
-77.1	86.1								81.0ft: hard, indurated, some sand
-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
-82.1	91.1					RUN-10			87.6ft: Switch sampling method to coring 87.6 to 88.1ft: rod drop
-87.1	96.1					RUN-11			88.1ft: moderately hard, moderately indurated
-92.9	101.9	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
-102.7	111.7	50/0.5			50/0.5	814-15			101.9ft: LIMESTONE, hard, some sand
-112.7	121.7	7	21	9	30	814-16			111.7ft: soft
-117.0		23	20	13	33	814-17			121.7ft: moderately hard
-122.7	131.7	11	7	10	17	814-18			POORLY GRADED SAND (SP), pale yellow (5Y7/4), medium dense, wet, fine grained sand, trace limestone fragments, strong HCl reaction (Tamiami Formation)
-126.0									
-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