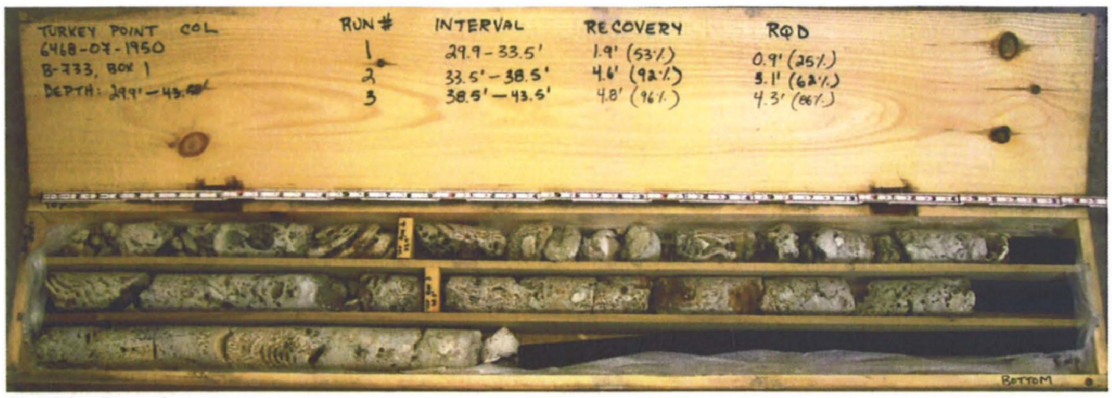
MACTEC

SHEET 1 OF 1

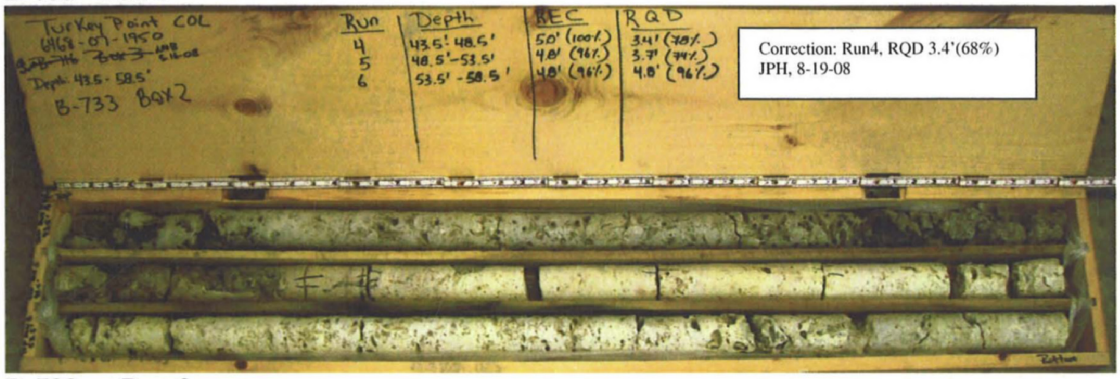
BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: L. Bisson
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-550 (ATL)	DRILLER: L. Carter/ J. Landeros	GROUND WATER (ft)
BORING NO.: B-733	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.0 ft (NAVD88)	NORTHING: 396,118 US ft (NAD83/90)	EASTING: 875,898 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 103.5 ft	CASING DEPTH: 4" to 28.0'		HAMMER (ID): 140 lb. Auto (MEC-03)
DATE STARTED: 5/15/08	COMPLETED: 5/17/08	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 @ 29.9 ft
-30.9	29.9	3.6	0:08/0.6 0:43 0:38 0:47	(1.9) 53%	(0.9) 25%	RUN-1	(16.3) 88%	(11.7) 63%		LIMESTONE, boundstone, pale yellow (2.5Y8/2), hard, wet, coralline, little vugs, strong HCl reaction (Upper Fort Thompson Formation) *(continued)* 29.9ft: white (10YR8/1), indurated, some vugs, recrystallized calcite
-34.5	33.5	5.0	0:39 0:39 1:27 1:09 1:24	(4.6) 92%	(3.1) 62%	RUN-2				32.0ft: loss of circulation 33.5ft: little vugs
-39.5	38.5	5.0	0:56 0:38 0:39 0:51 1:16	(4.8) 96%	(4.3) 86%	RUN-3				38.5ft: white (10YR8/1), to light gray (10YR7/1), few vugs
-44.5	43.5	5.0	1:17 0:47 0:32 0:30 0:19	(5.0) 100%	(3.4) 68%	RUN-4				43.5ft: white (10YR8/1), to light gray (10YR7/2), moderately hard, moderately indurated, trace sand
-49.5	48.5	5.0	0:48 1:03 0:40 0:32 0:27	(4.8) 96%	(3.7) 74%	RUN-5	(34.6) 63%	(18.2) 33%		-49.5 LIMESTONE, boundstone, light gray (10YR7/2), to white (10YR8/1), hard, indurated, fossiliferous, trace vugs, strong HCl reaction (Lower Fort Thompson Formation) 48.5
-54.5	53.5	5.0	0:50 0:50 0:51 0:33 0:26	(4.8) 96%	(4.8) 96%	RUN-6				53.5ft: white (10YR8/1)
-59.5	58.5	5.0	0:31 0:20 0:49 0:42 0:41	(4.1) 82%	(2.2) 44%	RUN-7				58.5ft: mottled light greenish gray (10Y7/1), moderately hard, moderately indurated
-64.5	63.5	5.0	0:36 0:50 0:24 0:12 0:14	(2.4) 48%	(0.0) 0%	RUN-8				63.5ft: light gray (10YR7/1) 66.0 to 93.5ft: possible interbedded sand; based on drilling rates and recovery
-69.5	68.5	5.0	0:10 0:38 0:33 0:42 0:39	(4.0) 80%	(1.6) 32%	RUN-9				68.5ft: white (10YR8/1)
-74.5	73.5	5.0	0:22 0:08 0:08 0:16 0:25	(1.5) 30%	(0.0) 0%	RUN-10				
-79.5	78.5	5.0	0:39 0:25 0:12 0:34 0:20	(3.3) 66%	(0.8) 16%	RUN-11				78.5ft: hard
-84.5	83.5	5.0	0:11 0:31 0:25 0:44 0:55	(0.7) 14%	(0.0) 0%	RUN-12				83.5ft: moderately hard
-89.5	88.5	5.0	0:38 0:29 0:16 0:15 0:12	(1.5) 30%	(0.4) 8%	RUN-13				88.5ft: hard, indurated
-94.5	93.5	5.0	0:30 0:26 0:24 0:30 0:28	(2.9) 58%	(0.9) 18%	RUN-14				93.5ft: moderately hard, moderately indurated
-99.5	98.5	5.0	0:24 0:22 0:22 0:25 0:21	(4.6) 92%	(3.8) 76%	RUN-15				
-104.5	103.5									-104.5 103.5 Coring Terminated at Elevation -104.5

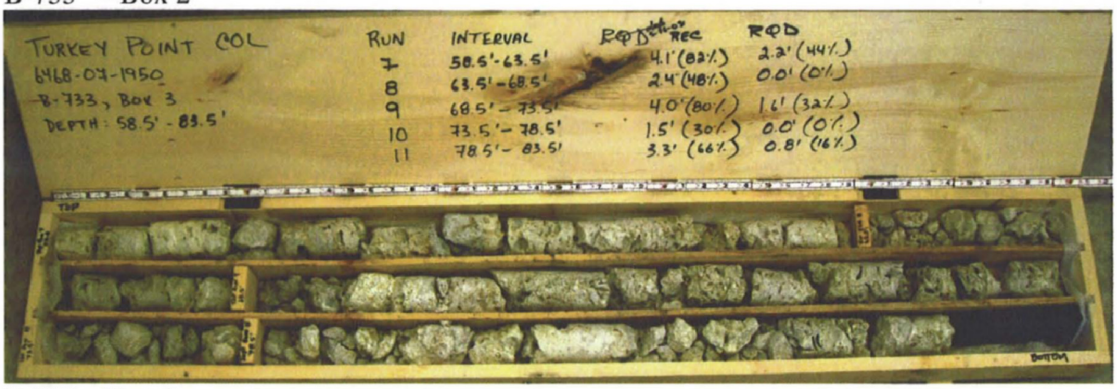
TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 5/30/08



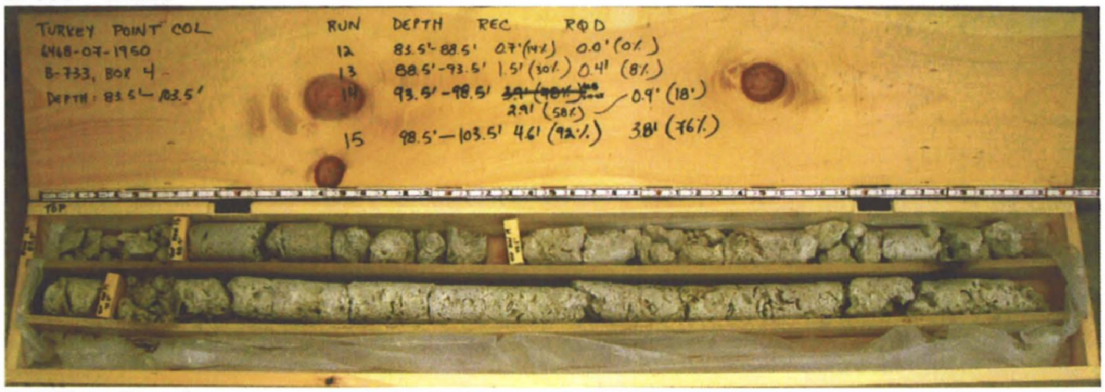
B-733– Box 1



B-733 – Box 2



B-733 – Box 3



B-733 – Box 4

MACTEC

GEOTECHNICAL BORING LOG

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

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-734	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -0.6 ft (NAVD88)	NORTHING: 395,833 US ft (NAD83/90)	EASTING: 875,546 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 130.0 ft	BORING DIAMETER: 4" to 39.6', 3" to 130.0'	CASING DEPTH: 4" to 39.6', 3" to 113.5'	HAMMER (ID):140 lb. Auto (MEC-12)
DATE STARTED: 3/26/08	COMPLETED: 4/4/08	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	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-0.6					Ground Surface				-0.6 / 0.0
-0.6 / -3.1	0.0 / 2.5	WOH	WOH	WOH	0 WOH	734-1			Sandy LEAN CLAY (CL), very dark grayish brown (2.5Y3/2), very soft, moist, strong HCl reaction
-5.8	5.2	WOH	WOH	WOH	0 WOH	734-2A&B			-2.6 / 2.0; -4.6 / 4.0; MUCK, black, (2.5Y3/1), to grayish brown (2.5Y5/2), very soft, wet, no to strong HCl reaction
-8.2	7.6	12	9	7	16	734-3			SEE LEGEND FOR ROCK HARDNESS CRITERIA BASED ON SPT DATA; LIMESTONE, boundstone, white (2.5Y8/1), very soft, moderately indurated, mostly oolitic (Miami Formation)
-10.8	10.2	3	6	6	12	734-4			
-13.3	12.7	2	5	6	11	734-5			
-15.8	15.2	10	17	10	27	734-6			12.7ft: soft, indurated
-19.1	18.5	3	8	14	22	734-7			
-24.1	23.5	16	28	21	49	734-8			18.5ft: moderately hard
-29.1	28.5	10	7	4	11	734-9			23.5ft: very soft; 23.5ft: loss of circulation
-30.1	29.5	26	50/0.5		76/0.9	734-10			-27.6 / 27.0; LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated (Upper Fort Thompson Formation); 29.5ft: Switch sampling method to coring; 29.5ft: few vugs, coralline
-32.2	31.6					RUN-1			
-37.2	36.6					RUN-2			
-42.2	41.6					RUN-3			36.6ft: trace recrystallized calcite; 37.5 to 39.5ft: possible interbedded sand layers; based on recovery and drilling rates
-47.2	46.6					RUN-4			
-52.2	51.6					RUN-5			46.6ft: light gray (10YR7/1); -49.6 / 49.0; LIMESTONE, boundstone, white (2.5YR8/1), hard, indurated, trace recrystallized calcite (Lower Fort Thompson Formation); 51.6ft: moderately hard to hard, moderately indurated to indurated, trace vugs
-57.2	56.6					RUN-6			
-62.2	61.6					RUN-7			56.6ft: hard, indurated
-67.2	66.6					RUN-8			61.6ft: little sand; Below 64.0ft: possible interbedded sand layers; based on recovery and drilling rates
-68.7	68.1	4	10	11	21	734-11			66.6ft: Switch sampling method to SPT; 66.6ft: soft; 68.1ft: Switch sampling method to coring; 68.1ft: hard, indurated
-72.2	71.6					RUN-9			
						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: S. Lehman
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-45C (RAL)	DRILLER: D. Rhodes/ K. Guy	GROUND WATER (ft)
BORING NO.: B-734	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -0.6 ft (NAVD88)	NORTHING: 395,833 US ft (NAD83/90)	EASTING: 875,546 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 130.0 ft	BORING DIAMETER: 4" to 39.6', 3" to 130.0'	CASING DEPTH: 4" to 39.6', 3" to 113.5'	HAMMER (ID):140 lb. Auto (MEC-12)
DATE STARTED: 3/26/08	COMPLETED: 4/4/08	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
-75.4					Continued from previous page				
-77.2	76.6					RUN-11			LIMESTONE, boundstone, white (2.5YR8/1). hard, indurated, trace recrystallized calcite (Lower Fort Thompson Formation) *(continued)*
-82.2	81.6					RUN-12			81.6ft: moderately hard, moderately indurated, trace shell molds and casts
-87.2	86.6					RUN-13			86.6ft: few vugs, trace sand
-92.2	91.6					RUN-14			
-97.2	96.6					RUN-15			
-102.2	101.6					RUN-16			101.6ft: no recovery, possible soft, friable limestone with interbedded sand layers
-107.2	106.6								
-108.7	108.1	5	14	16	30	734-12			106.6ft: Switch sampling method to SPT 106.6ft: soft, friable to moderately indurated 108.1ft: Switch sampling method to coring 108.1ft: moderately hard, moderately indurated to indurated, little sand
-112.2	111.6					RUN-17			
-113.6						RUN18			111.6ft: hard, indurated, few shell molds — 113.0
-117.2	116.6	9	9	8	17	734-13A&B			Silty SAND (SM), light gray (2.5Y7/2), medium dense, wet, fine grained sand with lenses of very soft, moderately indurated limestone (Tamiami Formation)
-124.1	123.5	11	5	5	10	734-14			123.5ft: greenish gray (10Y6/1), loose
-129.1	128.5	7	8	11	19	734-15			
-130.6									128.5ft: light greenish gray (10Y7/1), medium dense, cemented sand and shell fragments — 130.0 Boring Terminated at Elevation -130.6 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: S. Lehman
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-45C (RAL)	DRILLER: D. Rhodes/ K. Guy	GROUND WATER (ft)
BORING NO.: B-734	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -0.6 ft (NAVD88)	NORTHING: 395,833 US ft (NAD83/90)	EASTING: 875,546 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 130.0 ft	CASING DEPTH: 4" to 39.6', 3" to 113.5'		HAMMER (ID): 140 lb. Auto (MEC-12)
DATE STARTED: 3/26/08	COMPLETED: 4/4/08	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 @ 29.5 ft
-30.1	29.5	2.1	0:56	(1.9)	(1.2)	RUN-1	(14.6)	(12.4)		LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated (Upper Fort
-32.2	31.6		0:48	90%	57%		75%	64%		Thompson Formation) *(continued)*
		5.0	0:18/0.1	(4.8)	(4.2)	RUN-2				29.5ft: few vugs, coralline
			1:14	96%	84%					
			0:49							
			1:23							
			0:44							
-37.2	36.6		1:10							
		5.0	0:32	(1.7)	(1.2)	RUN-3				36.6ft: trace recrystallized calcite
			0:08	34%	24%					37.5 to 39.5ft: possible interbedded sand layers; based on recovery and drilling
			0:46							rates
			2:40							
-42.2	41.6		4:46							
		5.0	1:42	(4.9)	(4.9)	RUN-4				
			1:33	98%	98%					
			1:33							
			1:37							
-47.2	46.6		1:43							
		5.0	0:47	(2.0)	(1.3)	RUN-5				46.6ft: light gray (10YR7/1)
			1:32	40%	26%					-49.6 — 49.0
			2:08							
			2:48				(24.6)	(15.7)		LIMESTONE, boundstone, white (2.5YR8/1), hard, indurated, trace
-52.2	51.6		3:10				40%	26%		recrystallized calcite (Lower Fort Thompson Formation)
		5.0	1:42	(4.7)	(3.9)	RUN-6				51.6ft: moderately hard to hard, moderately indurated to indurated, trace vugs
			0:59	94%	78%					
			1:09							
			0:46							
-57.2	56.6		1:03							
		5.0	0:46	(3.5)	(2.7)	RUN-7				56.6ft: hard, indurated
			1:06	70%	54%					
			1:20							
			0:46							
-62.2	61.6		0:45							
		5.0	1:17	(1.9)	(1.4)	RUN-8				61.6ft: little sand
			0:26	38%	28%					Below 64.0ft: possible interbedded sand layers; based on recovery and drilling
			0:48							rates
			0:09							
-67.2	66.6		0:05							
			N=21			*734-11*				66.6ft: Switch sampling method to SPT
-68.7	68.1	3.5	0:27	(1.5)	(1.5)	RUN-9				66.6ft: soft
			1:56	43%	43%					68.1ft: Switch sampling method to coring
			0:21							68.1ft: hard, indurated
-72.2	71.6		0:08/0.5							
		5.0	1:00	(1.1)	(0.0)	RUN-10				
			1:09	22%	0%					
			0:58							
			0:25							
-77.2	76.6		2:20							
		5.0	1:02	(1.0)	(0.0)	RUN-11				
			0:08	20%	0%					
			0:15							
			0:12							
-82.2	81.6		2:00							
		5.0	0:42	(2.2)	(1.3)	RUN-12				81.6ft: moderately hard, moderately indurated, trace shell molds and casts
			0:53	44%	26%					
			0:58							
			0:54							
-87.2	86.6		0:46							
		5.0	1:02	(2.4)	(1.7)	RUN-13				86.6ft: few vugs, trace sand
			0:39	48%	34%					
			0:25							
			0:40							
-92.2	91.6		0:26							
		5.0	0:19	(2.0)	(0.4)	RUN-14				
			0:28	40%	8%					
			0:26							
			0:38							
-97.2	96.6		1:02							
		5.0	0:39	(0.6)	(0.4)	RUN-15				
			0:42	12%	8%					
			0:36							
			0:34							
-102.2	101.6		0:27							
		5.0	0:21	(0.0)	(0.0)	RUN-16				101.6ft: no recovery, possible soft, friable limestone with interbedded sand
			0:43	0%	0%					layers

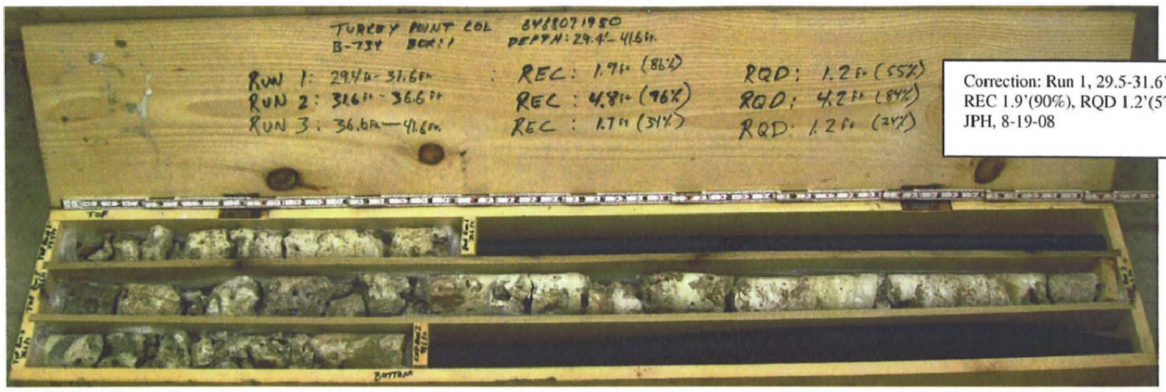
TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 5/30/08

MACTEC

BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: S. Lehman
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-45C (RAL)	DRILLER: D. Rhodes/ K. Guy	GROUND WATER (ft)
BORING NO.: B-734	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -0.6 ft (NAVD88)	NORTHING: 395,833 US ft (NAD83/90)	EASTING: 875,546 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 130.0 ft	CASING DEPTH: 4" to 39.6', 3" to 113.5'		HAMMER (ID): 140 lb. Auto (MEC-12)
DATE STARTED: 3/26/08	COMPLETED: 4/4/08	CORE SIZE: HQ3	CORE BARREL TYPE: Triple Tube Wireline (Split inner liners)

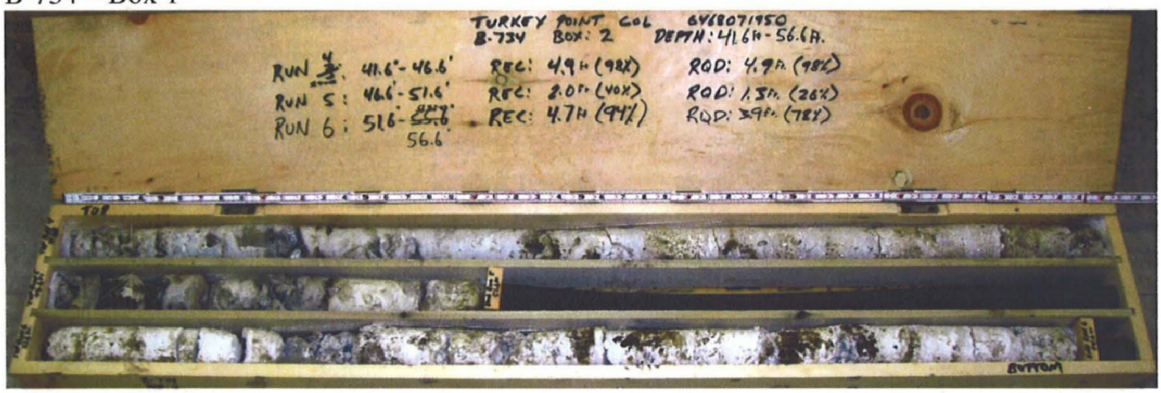
ELEV. (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS
										Continued from previous page
-107.2	106.6		0:24 0:39 0:38							LIMESTONE, boundstone, white (2.5YR8/1), hard, indurated, trace recrystallized calcite (Lower Fort Thompson Formation) *(continued)*
			N=30			*734-12*				106.6ft: Switch sampling method to SPT
-108.7	108.1	3.5	0:58 0:33 0:47	(2.4) 69%	(2.0) 57%	RUN-17				106.6ft: soft, friable to moderately indurated 108.1ft: Switch sampling method to coring 108.1ft: moderately hard, moderately indurated to indurated, little sand
-112.2	111.6		0:09/0.5							
		5.0	0:39 0:17 0:18 0:29	(0.6) 12%	(0.0) 0%	RUN18				-113.6 111.6ft: hard, indurated, few shell molds 113.0
							(0.0) 0%	(NA)		Silty SAND (SM), light gray (2.5Y7/2), medium dense, wet, fine grained sand with lenses of very soft, moderately indurated limestone (Tamiami Formation)
-117.2	116.6		0:19							-117.2 116.6
										Coring Terminated at Elevation -117.2

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

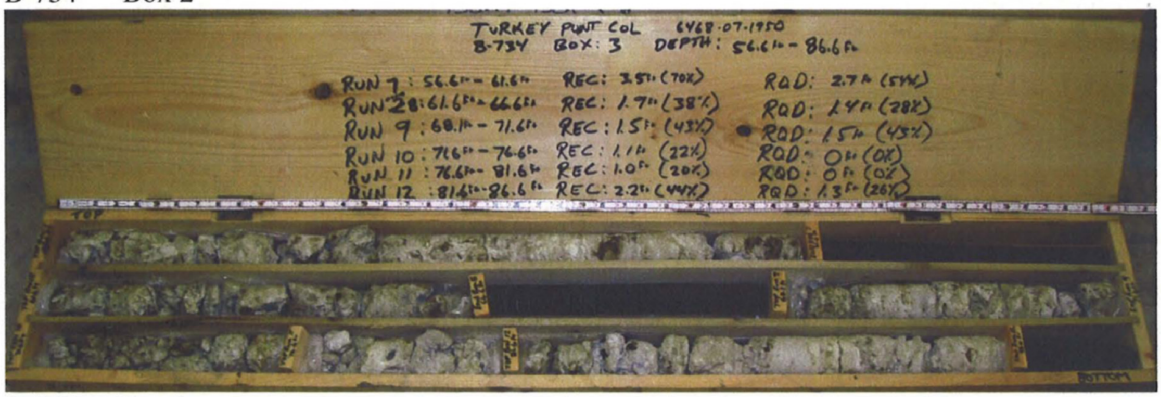


Correction: Run 1, 29.5-31.6', REC 1.9'(90%), RQD 1.2'(57%) JPH, 8-19-08

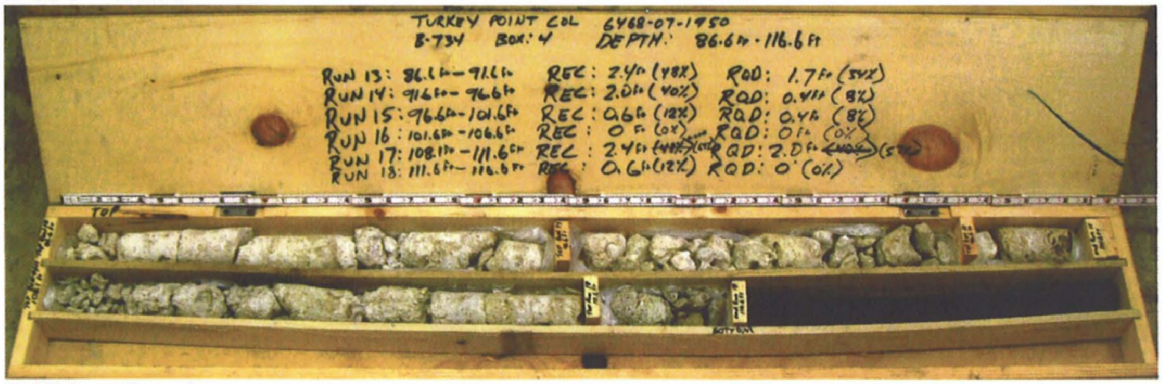
B-734 – Box 1



B-734 – Box 2



B-734 – Box 3



B-734 – Box 4

MACTEC

GEOTECHNICAL BORING LOG

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

BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: O. Rodriguez
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-45C (RAL)	DRILLER: D. Rhodes/ K. Guy	GROUND WATER (ft)
BORING NO.: B-735	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -0.8 ft (NAVD88)	NORTHING: 395,825 US ft (NAD83/90)	EASTING: 875,689 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 128.0 ft	BORING DIAMETER: 4" to 29.1', 3" to 128.0'	CASING DEPTH: 4" to 29.1', 3" to 118.6'	HAMMER (ID):140 lb. Auto (MEC-12)
DATE STARTED: 3/20/08	COMPLETED: 3/25/08	CORE SIZE: HQ3	BITS USED: 2 15/16" 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
-0.8					Ground Surface				-0.8 / 0.0
-0.8 / -3.2	0.0 / 2.4	WOH	WOH	WOH	0 WOH	735-1			0.0ft: MUCK - no recovery
-5.7	4.9	WOH	WOH	2	2	735-2			-4.5 / 3.7 Field notes do not indicate that sample 735-2 was split into separate jars 2.4ft: MUCK, black (7.5YR2.5/1), very soft, wet, organics
-8.3	7.5	24	37	25	SEE LEGEND FOR ROCK HARDNESS CRITERIA BASED ON SPT DATA 62	735-3			LIMESTONE, boundstone, white (2.5Y8/1), very soft, wet (Miami Formation)
-10.8	10.0	4	5	5	10	735-4			4.9ft: hard, strong HCl reaction, trace fine grained sand, oolitic
-13.1	12.3	3	6	8	14	735-5			7.5ft: very soft, friable
-15.6	14.8	18	11	11	22	735-6			12.3ft: soft, moderately indurated
-18.7	17.9	18	12	11	23	735-7			
-23.3	22.5	5	2	1	3	735-8			17.9ft: very soft
-28.1	27.3	4	8	3	11	735-9			-26.8 / 26.0
-29.8	29.0	7	35	25	60	735-10			LIMESTONE, boundstone, white (2.5Y8/1), moderately hard, wet, strong HCl reaction, trace to few fine grained sand (Upper Fort Thompson Formation) 29.0ft: hard
-31.0	30.2	3	3	50/0.2	53/0.7	735-11			30.2ft: Switch sampling method to coring
-32.5	31.7					RUN-1			30.2ft: moderately hard, moderately indurated, few to little vugs, fossiliferous
-37.5	36.7					RUN-2			31.7ft: hard, indurated, coralline, recrystallized calcite
-42.5	41.7					RUN-3			36.7ft: white (2.5Y8/1), to pale yellow (2.5Y8/4), hard to moderately hard, indurated, few vugs
-47.5	46.7					RUN-4			41.7ft: hard
-52.5	51.7					RUN-5			46.7ft: gray (10YR6/1) -49.3 / 48.5 LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, few vugs, fossiliferous (Lower Fort Thompson Formation) 51.7ft: little vugs, trace to few shell molds and casts, trace sand
-57.5	56.7					RUN-6			
-62.5	61.7					RUN-7			
-67.5	66.7					RUN-8			
-72.5	71.7					RUN-9			66.7 to 71.7ft: indurated to moderately indurated, few vugs, possible interbedded sand layers; based on recovery and drilling rates
-74.5	73.7					RUN-10			
						RUN-11			

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: O. Rodriguez
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-45C (RAL)	DRILLER: D. Rhodes/ K. Guy	GROUND WATER (ft)
BORING NO.: B-735	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -0.8 ft (NAVD88)	NORTHING: 395,825 US ft (NAD83/90)	EASTING: 875,689 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 128.0 ft	BORING DIAMETER: 4" to 29.1', 3" to 128.0'	CASING DEPTH: 4" to 29.1', 3" to 118.6'	HAMMER (ID):140 lb. Auto (MEC-12)
DATE STARTED: 3/20/08	COMPLETED: 3/25/08	CORE SIZE: HQ3	BITS USED: 2 15/16" 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
-75.6					Continued from previous page				
-76.2	75.4								73.7: little vugs, few to little sand
-77.3	76.5					RUN-12			LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, few vugs, fossiliferous (Lower Fort Thompson Formation) *(continued)*
						RUN-13			75.4ft: moderately hard
-82.3	81.5								76.5 to 113.0ft: possible interbedded sand layers; based on recovery and drilling rates
						RUN-14			
-87.3	86.5								
						RUN-15			
-92.3	91.5								
						RUN-16			
-97.3	96.5								
						RUN-17			
-102.3	101.5								
						RUN-18			101.5ft: few shell molds and casts
-107.3	106.5								
						RUN-19			106.5ft: trace shell molds and casts
-112.3	111.5								
						RUN-20			111.5ft: little vugs
-113.8									113.0
-118.1	117.3								POORLY GRADED SAND with silt (SP-SM), white (2.5Y8/1), medium dense, wet, strong HCl reaction, fine to coarse grained sand, cemented sand fragments, trace shell fragments (Tamiami Formation)
		3	8	13	21	735-12			
-123.8									123.0
-127.3	126.5								Silty SAND (SM), greenish gray (10Y6/1), dense, wet, strong HCl reaction
		20	21	18	39	735-13			
-128.8									128.0
									Boring Terminated at Elevation -128.8 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: O. Rodriguez
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-45C (RAL)	DRILLER: D. Rhodes/ K. Guy	GROUND WATER (ft)
BORING NO.: B-735	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -0.8 ft (NAVD88)	NORTHING: 395,825 US ft (NAD83/90)	EASTING: 875,689 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 128.0 ft	CASING DEPTH: 4" to 29.1', 3" to 118.6'		HAMMER (ID): 140 lb. Auto (MEC-12)
DATE STARTED: 3/20/08	COMPLETED: 3/25/08	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
										Begin Coring @ 30.2 ft
-31.0	30.2	1.5	2:12	(1.5)	(1.1)	RUN-1	(18.3)	(15.0)		LIMESTONE, boundstone, white (2.5Y8/1), moderately hard, wet, strong HCl reaction, trace to few fine grained sand (Upper Fort Thompson Formation) *(continued)*
-32.5	31.7	5.0	0:33/0.5	100%	73%	RUN-2	100%	82%		30.2ft: moderately hard, moderately indurated, few to little vugs, fossiliferous
			2:19	(5.0)	(4.7)					31.7ft: hard, indurated, coralline, recrystallized calcite
			2:16	100%	94%					
			2:22							
			2:06							
-37.5	36.7		1:46							
		5.0	1:04	(5.0)	(4.6)	RUN-3				36.7ft: white (2.5Y8/1), to pale yellow (2.5Y8/4), hard to moderately hard, indurated, few vugs
			1:10	100%	92%					
			2:11							
			2:13							
-42.5	41.7		1:54							
		5.0	2:04	(5.0)	(3.3)	RUN-4				41.7ft: hard
			1:58	100%	66%					
			1:54							
			1:41							
-47.5	46.7		1:34							
		5.0	2:08	(5.0)	(4.3)	RUN-5				46.7ft: gray (10YR6/1)
			1:58	100%	86%					-49.3 48.5
			1:55				(23.7)	(10.9)		LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, few vugs, fossiliferous (Lower Fort Thompson Formation)
			2:06				37%	17%		
-52.5	51.7		1:58							
		5.0	1:10	(3.7)	(2.6)	RUN-6				51.7ft: little vugs, trace to few shell molds and casts, trace sand
			1:22	74%	52%					
			1:13							
			1:44							
-57.5	56.7		0:58							
		5.0	1:02	(3.4)	(2.0)	RUN-7				
			0:47	68%	40%					
			0:40							
			0:59							
-62.5	61.7		0:52							
		5.0	0:54	(3.4)	(1.9)	RUN-8				
			0:48	68%	38%					
			1:16							
			1:33							
-67.5	66.7		1:42							
		5.0	0:14	(1.4)	(0.5)	RUN-9				66.7 to 71.7ft: indurated to moderately indurated, few vugs, possible interbedded sand layers; based on recovery and drilling rates
			0:31	28%	10%					
			0:38							
			1:05							
-72.5	71.7		1:36							
		2.0	1:37	(1.7)	(0.9)	RUN-10				
-74.5	73.7		4:07	85%	45%					
		1.7	1:38	(1.4)	(0.0)	RUN-11				73.7: little vugs, few to little sand
-76.2	75.4		5:36/0.7	82%	0%					
-77.3	76.5	1.1	1:04			RUN-12				75.4ft: moderately hard
		5.0	10:00/0.1	(0.2)	(0.0)	RUN-13				76.5 to 113.0ft: possible interbedded sand layers; based on recovery and drilling rates
			1:22	18%	0%					
			2:57	(0.6)	(0.0)					
			2:11	12%	0%					
			1:12							
-82.3	81.5		2:12							
		5.0	0:54	(0.3)	(0.0)	RUN-14				
			0:26	6%	0%					
			0:07							
			0:13							
-87.3	86.5		1:19							
		5.0	1:42	(0.2)	(0.0)	RUN-15				
			0:33	4%	0%					
			0:29							
			0:46							
-92.3	91.5		2:07							
		5.0	0:57	(0.0)	(0.0)	RUN-16				
			0:42	0%	0%					
			0:18							
			0:35							
-97.3	96.5		0:39							
		5.0	0:20	(0.6)	(0.0)	RUN-17				
			0:51	12%	0%					
			0:43							
			0:52							
-102.3	101.5		0:50							
		5.0	0:49	(1.4)	(0.0)	RUN-18				101.5ft: few shell molds and casts
			0:53	28%	0%					
			1:04							

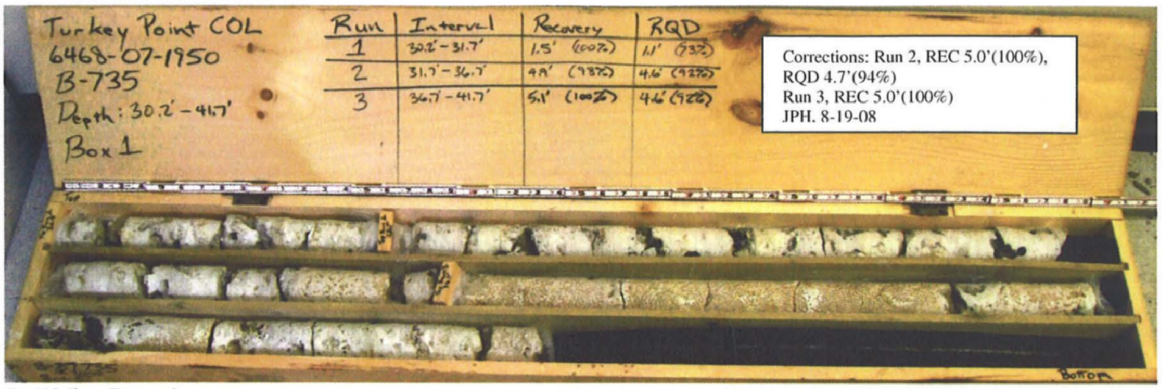
TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 5/30/08

MACTEC

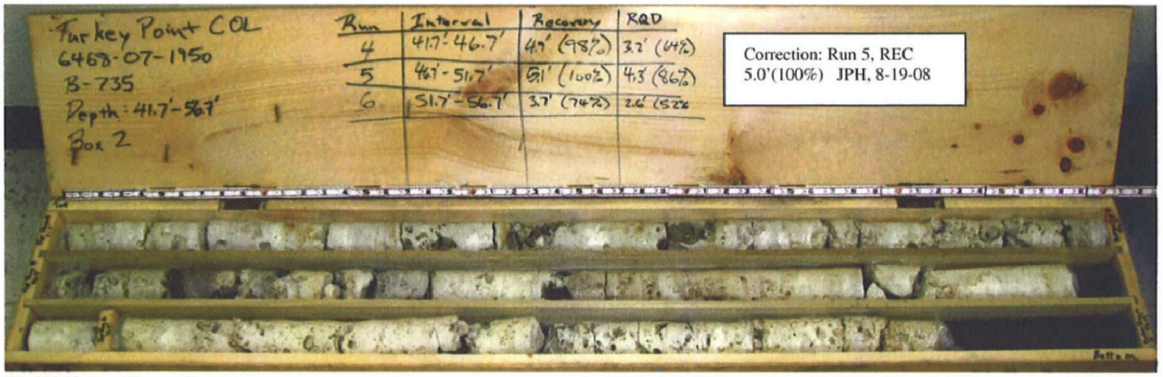
BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: O. Rodriguez
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-45C (RAL)	DRILLER: D. Rhodes/ K. Guy	GROUND WATER (ft)
BORING NO.: B-735	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -0.8 ft (NAVD88)	NORTHING: 395,825 US ft (NAD83/90)	EASTING: 875,689 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 128.0 ft	CASING DEPTH: 4" to 29.1', 3" to 118.6'		HAMMER (ID): 140 lb. Auto (MEC-12)
DATE STARTED: 3/20/08	COMPLETED: 3/25/08	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
-107.3	106.5		1:15 0:40							LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, few vugs, fossiliferous (Lower Fort Thompson Formation) *(continued)* 106.5ft: trace shell molds and casts
		5.0	0:11 0:57 0:36 1:09 1:05	(1.3) 26%	(0.0) 0%	RUN-19				
-112.3	111.5									
		5.0	0:30 0:34 0:33 0:34 0:35	(2.1) 42%	(0.0) 0%	RUN-20				111.5ft: little vugs
-113.8										113.0
							(1.2) 34%	(NA)		POORLY GRADED SAND with silt (SP-SM), white (2.5Y8/1), medium dense, wet, strong HCl reaction, fine to coarse grained sand, cemented sand fragments, trace shell fragments (Tamiami Formation)
-117.3	116.5									116.5
										Coring Terminated at Elevation -117.3

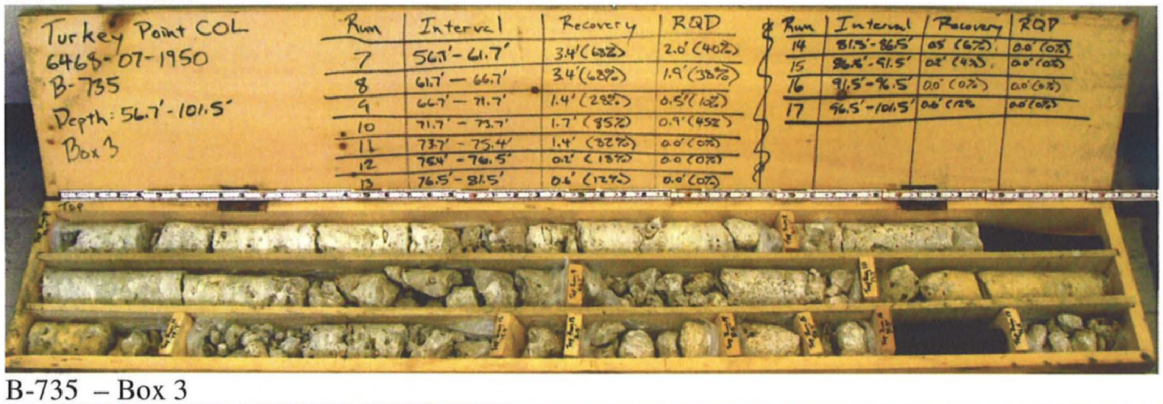
TURKEY POINT COL CORE: TURKEY POINT.GPJ TURKEY POINT COL.GDT 5/30/08



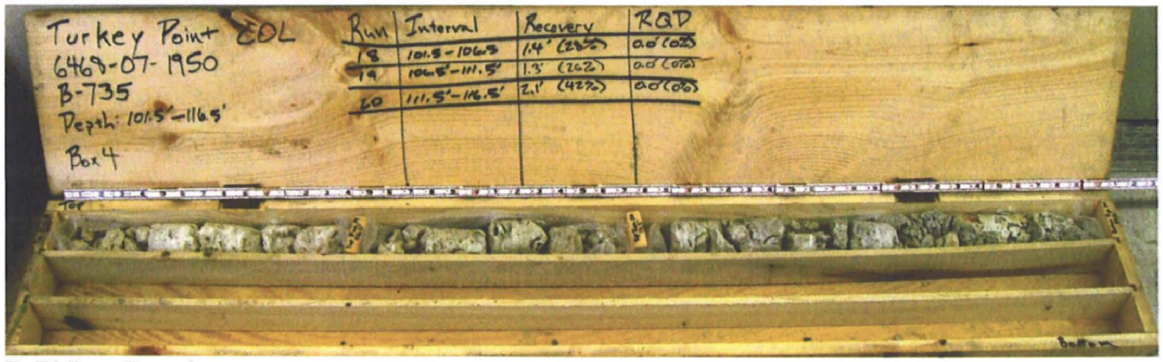
B-735 – Box 1



B-735 – Box 2



B-735 – Box 3



B-735 – Box 4

MACTEC

GEOTECHNICAL BORING LOG

Prepared By [illegible] Date 8-18-08
Checked By [illegible] Date 8/19/08

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/ 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	BORING DIAMETER: 4" to 24.8', 3" to 125.0'	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	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
-0.5					Ground Surface				-0.5 / 0.0
-0.5 / -4.0	0.0 / 3.5	WOH	WOH	WOH	WOH 0	736-1			FAT CLAY with sand (CH), dark grayish brown (10YR4/2), very soft, moist, fine grained sand, strong HCl reaction (-2.5 / 2.0)
-4.0 / -7.0	3.5 / 6.5	WOH	4	5	9	736-2A&B			MUCK, black (10YR2/1), very soft, wet, few sand, organics, weak HCl reaction (-4.5 / 4.0)
-7.0 / -9.0	6.5 / 8.5	3	24	14	38	736-3			LIMESTONE, boundstone, white (2.5Y8/1), very soft, moderately indurated, oolitic (Miami Formation)
-9.0 / -11.6	8.5 / 11.1	3	5	2	7	736-4			6.5ft: light gray (10YR7/1), medium hard, moderately indurated
-11.6 / -14.0	11.1 / 13.5	2	6	11	17	736-5			8.5ft: white (2.5Y8/1), very soft 11.1ft: trace shell fragments
-14.0 / -18.9	13.5 / 18.4	8	11	10	21	736-6			13.5ft: soft
-18.9 / -23.9	18.4 / 23.4	4	3	2	5	736-7A&B			18.4ft: very soft 19.4 to 21.6ft: poorly graded sand, white (2.5Y8/1), loose, wet
-23.9 / -28.9	23.4 / 28.4	6	9	5	14	736-8			23.4ft: indurated -27.5 / 27.0
-28.9 / -33.9	28.4 / 33.4	16	19	20	39	736-9			LIMESTONE, boundstone, white (2.5Y8/1), medium hard, indurated (Upper Fort Thompson Formation)
-33.9 / -34.1	33.4 / 33.6	50/0.2			50/0.2	736-10			33.6ft: Switch sampling method to coring 33.4ft: hard 33.6ft: little vugs
-34.1 / -37.6	33.6 / 37.1					RUN-1			
-37.6 / -42.6	37.1 / 42.1					RUN-2			
-42.6 / -47.6	42.1 / 47.1					RUN-3			42.1ft: few vugs, recrystallized calcite -47.6 / 47.1
-47.6 / -52.6	47.1 / 52.1					RUN-4			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)
-52.6 / -57.6	52.1 / 57.1					RUN-5			52.1ft: medium hard to hard
-57.6 / -62.6	57.1 / 62.1					RUN-6			57.1ft: moderately hard, trace vugs
-62.6 / -67.6	62.1 / 67.1					RUN-7			62.1ft: few to little shell molds and casts
-67.6 / -72.6	67.1 / 72.1					RUN-8			67.1ft: moderately hard to hard, moderately indurated to indurated, trace shell molds and casts
-72.6	72.1					RUN-9			72.1ft: moderately hard, moderately indurated, trace vugs, fossiliferous

SEE LEGEND FOR ROCK HARDNESS CRITERIA BASED ON SPT DATA

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

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/ 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	BORING DIAMETER: 4" to 24.8', 3" to 125.0'	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	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
-75.3					Continued from previous page				
-77.6	77.1					RUN-10			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)*
-82.6	82.1					RUN-11			77.1ft: moderately hard to hard, moderately indurated to indurated, trace coarse grained sand
-87.6	87.1					RUN-12			87.1ft: hard, indurated
-92.6	92.1					RUN-13			92.1ft: moderately indurated to indurated, little medium to coarse sand, possible interbedded sand layers; based on recovery and drilling rates
-97.6	97.1					RUN-14			97.1ft: medium hard to hard, few shell molds and casts
-102.6	102.1					RUN-15			102.1ft: hard, indurated, little shell molds and casts
-107.6	107.1					RUN-16			107.1ft: possible interbedded sand layers; based on recovery and drilling rates
-112.6	112.1					RUN-17			112.1ft: soft to moderately hard, friable to moderately indurated, little sand
-114.5	114.0								POORLY GRADED SAND (SP-SM), light gray (5Y7/2), medium dense, wet, fine grained sand, weak HCl reaction, fragments of cemented sand (Tamiami Formation)
-117.6	117.1	14	8	5	13	736-11			117.1ft: Switch sampling method to SPT
-124.0	123.5	5	8	7	15	736-12			
-125.5	125.0								Boring Terminated at Elevation -125.5 ft.

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

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/ 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
										Begin Coring @ 33.6 ft
-34.1	33.6	3.5	0:52 0:46 0:25 0:34/0.5	(0.6) 17%	(0.0) 0%	RUN-1	(6.8) 50%	(3.1) 23%		LIMESTONE, boundstone, white (2.5Y8/1), medium hard, indurated (Upper Fort Thompson Formation) *(continued)* 33.6ft: little vugs
-37.6	37.1	5.0	1:40 1:22 0:56 0:59 0:37	(2.0) 40%	(0.0) 0%	RUN-2				
-42.6	42.1	5.0	1:20 1:41 2:01 2:06 2:32	(4.2) 84%	(3.1) 62%	RUN-3				42.1ft: few vugs, recrystallized calcite
-47.6	47.1	5.0	1:20 1:32 1:12 1:02 1:09	(5.0) 100%	(4.7) 94%	RUN-4	(42.9) 64%	(34.9) 52%		-47.6 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) 47.1
-52.6	52.1	5.0	0:59 0:50 1:39 1:27 1:37	(5.0) 100%	(5.0) 100%	RUN-5				52.1ft: medium hard to hard
-57.6	57.1	5.0	0:48 0:56 0:34 1:09 1:32	(4.4) 88%	(4.1) 82%	RUN-6				57.1ft: moderately hard, trace vugs
-62.6	62.1	5.0	0:58 0:49 0:50 0:51 0:23	(1.9) 38%	(0.9) 18%	RUN-7				62.1ft: few to little shell molds and casts
-67.6	67.1	5.0	0:38 0:42 2:06 1:35 1:54	(3.3) 66%	(3.0) 60%	RUN-8				67.1ft: moderately hard to hard, moderately indurated to indurated, trace shell molds and casts
-72.6	72.1	5.0	1:01 0:55 0:54 1:27 0:52	(4.0) 80%	(3.8) 76%	RUN-9				72.1ft: moderately hard, moderately indurated, trace vugs, fossiliferous
-77.6	77.1	5.0	0:54 1:06 1:42 0:52 1:16	(3.5) 70%	(3.5) 70%	RUN-10				77.1ft: moderately hard to hard, moderately indurated to indurated, trace coarse grained sand
-82.6	82.1	5.0	0:46 1:06 0:45 0:54 2:01	(2.9) 58%	(1.8) 36%	RUN-11				
-87.6	87.1	5.0	1:38 1:40 1:39 2:04 3:34	(1.6) 32%	(1.1) 22%	RUN-12				87.1ft: hard, indurated
-92.6	92.1	5.0	0:26 0:42 0:34 0:12 0:34	(1.8) 36%	(1.0) 20%	RUN-13				92.1ft: moderately indurated to indurated, little medium to coarse sand, possible interbedded sand layers; based on recovery and drilling rates
-97.6	102.1	5.0	0:54 1:26 1:14 1:30 1:54	(3.4) 68%	(2.1) 42%	RUN-14				97.1ft: medium hard to hard, few shell molds and casts
-102.6	107.1	5.0	0:55 0:47 0:38 1:02 1:12	(3.9) 78%	(3.9) 78%	RUN-15				102.1ft: hard, indurated, little shell molds and casts
		5.0	0:57	(1.3)	(0.0)	RUN-16				107.1ft: possible interbedded sand layers; based on recovery and drilling rates

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