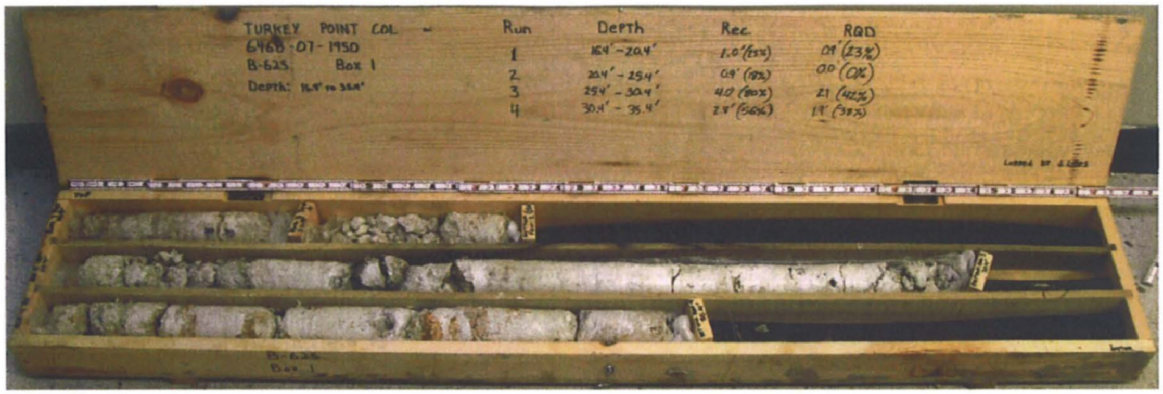
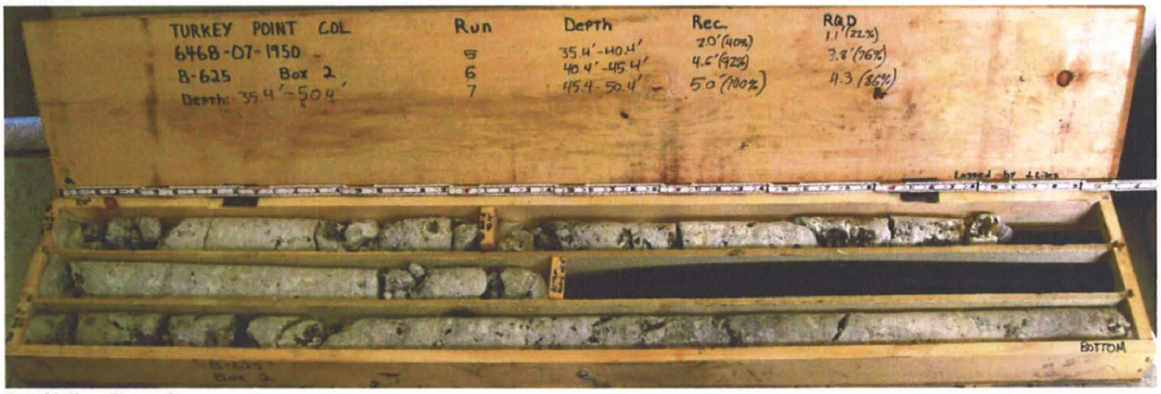
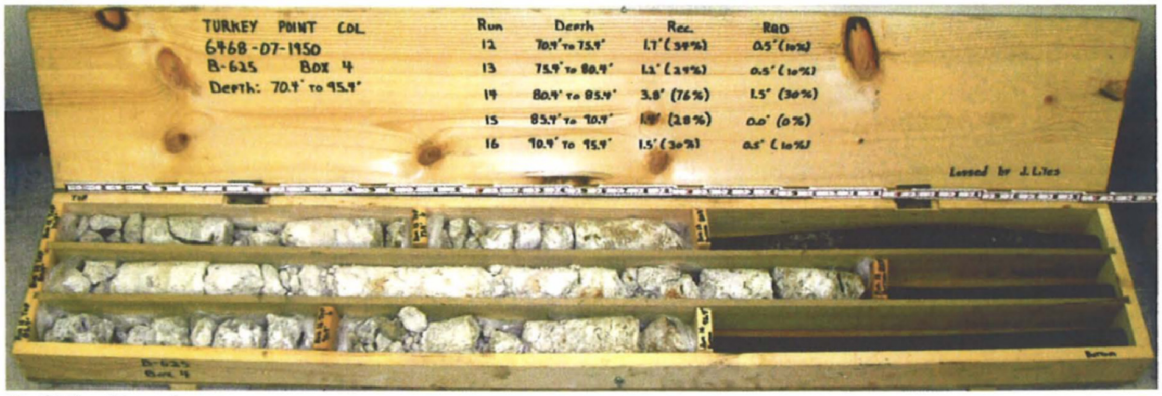


B-625 – Box 1

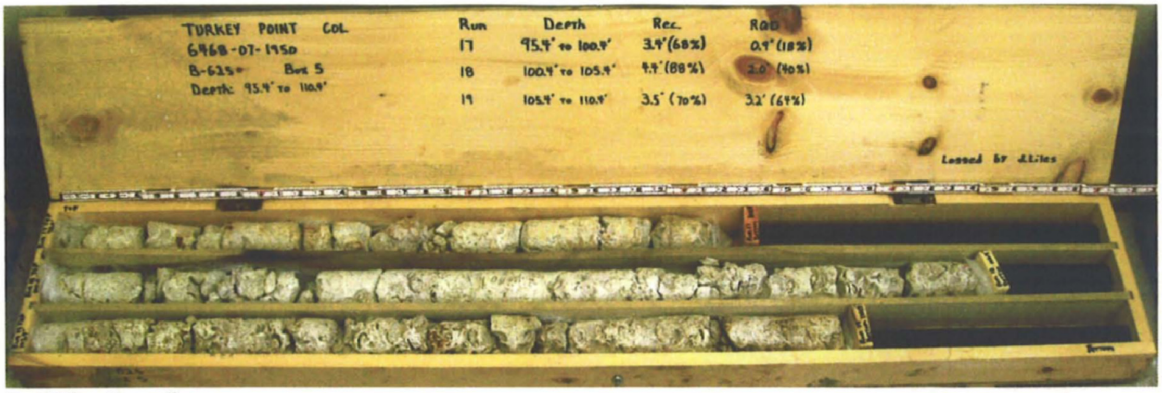


B-625 – Box 2

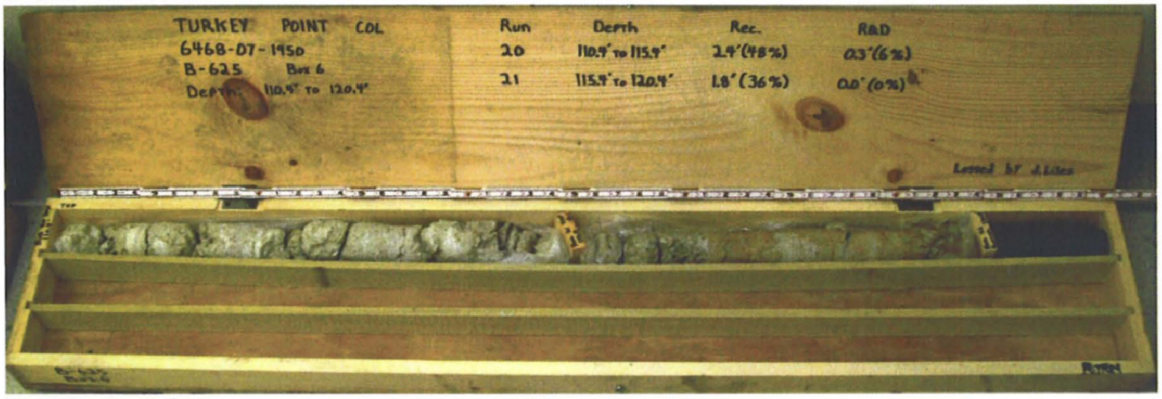
B-625 – Box 3



B-625 – Box 4



B-625 – Box 5



B-625 – Box 6

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: J. Liles
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-550 (Miller)	DRILLER: R. White/ J. Dugger	GROUND WATER (ft)
BORING NO.: B-626	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.6 ft (NAVD88)	NORTHING: 396,875 US ft (NAD83/90)	EASTING: 876,857 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 100.6 ft	BORING DIAMETER: 4" to 29.4', 3" to 100.6'	CASING DEPTH: 4" to 29.4'	HAMMER (ID):140 lb. Auto (M06)
DATE STARTED: 3/18/08	COMPLETED: 3/20/08	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
-1.6					Ground Surface				-1.6 / 0.0
-1.6 / -4.5	0.0 / 2.9	WOH	WOH	WOH	WOH 0	626-1			MUCK, black (2.5Y2.5/1), very soft, wet, no HCl reaction, fibrous
-6.6	5.0	WOH	7	10	17	626-2A&B			-5.1 / 3.5 LIMESTONE, boundstone, white (2.5Y8/1), very soft, wet, strong HCl reaction, oolitic (Miami Formation)
-9.0	7.4	10	10	6	16 (SEE LEGEND FOR ROCK HARDNESS CRITERIA BASED ON SPT DATA)	626-3			
-11.1	9.5	9	4	4	8	626-4			
-14.1	12.5	3	5	3	8	626-5			
-16.5	14.9	9	8	9	17	626-6			
-20.2	18.6	6	17	31	48	626-7			14.9ft: moderately hard
		2	6	8	14	626-8			18.6ft: very soft
-28.3	26.7								-25.6 / 24.0 LIMESTONE, boundstone, white (2.5Y8/1), hard, wet, strong HCl reaction (Upper Fort Thompson Formation)
-28.7 / -30.2	27.1 / 28.6	50/0.4			50/0.4	626-9 / RUN-1			27.1ft: Switch sampling method to coring
						RUN-2			27.1ft: white (2.5Y8/1), moderately hard, moderately indurated, fossiliferous, strong HCl reaction, few vugs
-35.2	33.6					RUN-3			27.5ft: loss of circulation 28.6ft: hard, indurated 33.6ft: moderately hard, moderately indurated, recrystallized calcite
-40.2	38.6					RUN-4			38.6ft: moderately indurated to indurated, little vugs
-45.2	43.6					RUN-5			43.6ft: white (2.5Y8/1) to 45.3ft then light gray (10YR6/1) to 48.6ft
-50.2	48.6					RUN-6			-50.2 / 48.6 LIMESTONE, boundstone, white (2.5Y8/1), moderately hard, moderately indurated, trace vugs, fossiliferous, strong HCl reaction (Lower Fort Thompson Formation)
-55.2	53.6					RUN-7			
-60.2	58.6					RUN-8			
-65.2	63.6					RUN-9			63.6ft: moderately hard to hard, moderately indurated to indurated
-70.2	68.6					RUN-10			
-75.2	73.6					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: J. Liles
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-550 (Miller)	DRILLER: R. White/ J. Dugger	GROUND WATER (ft)
BORING NO.: B-626	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.6 ft (NAVD88)	NORTHING: 396,875 US ft (NAD83/90)	EASTING: 876,857 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 100.6 ft	BORING DIAMETER: 4" to 29.4', 3" to 100.6'	CASING DEPTH: 4" to 29.4'	HAMMER (ID):140 lb. Auto (M06)
DATE STARTED: 3/18/08	COMPLETED: 3/20/08	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
-76.4					Continued from previous page				
									LIMESTONE, boundstone, white (2.5Y8/1), moderately hard, moderately indurated, trace vugs, fossiliferous, strong HCl reaction (Lower Fort Thompson Formation) *(continued)*
-80.2	78.6					RUN-12			
-85.2	83.6					RUN-13			
-90.2	88.6					RUN-14			88.6ft: medium hard to moderately hard, friable to moderately indurated
-95.2	93.6					RUN-15			
-100.2	98.6					RUN-16			
									-102.2 100.6
									Boring Terminated at Elevation -102.2 ft

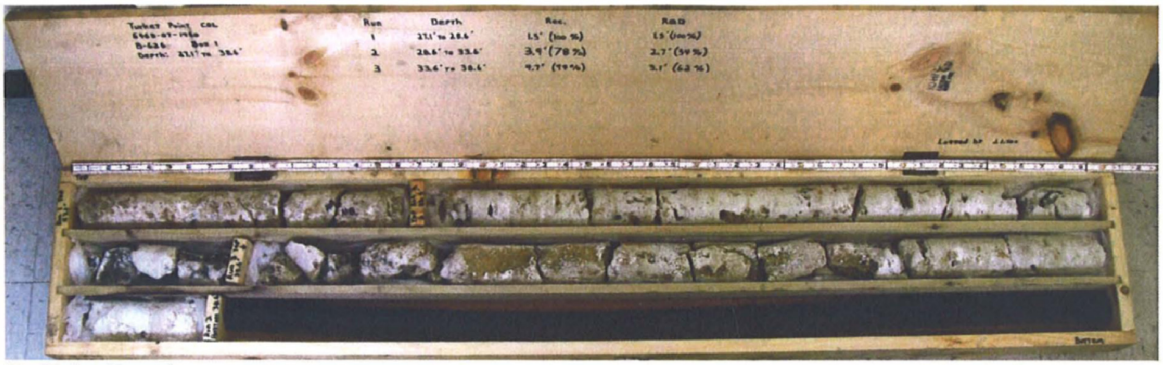
TURKEY POINT COL BORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 5/30/08

MACTEC

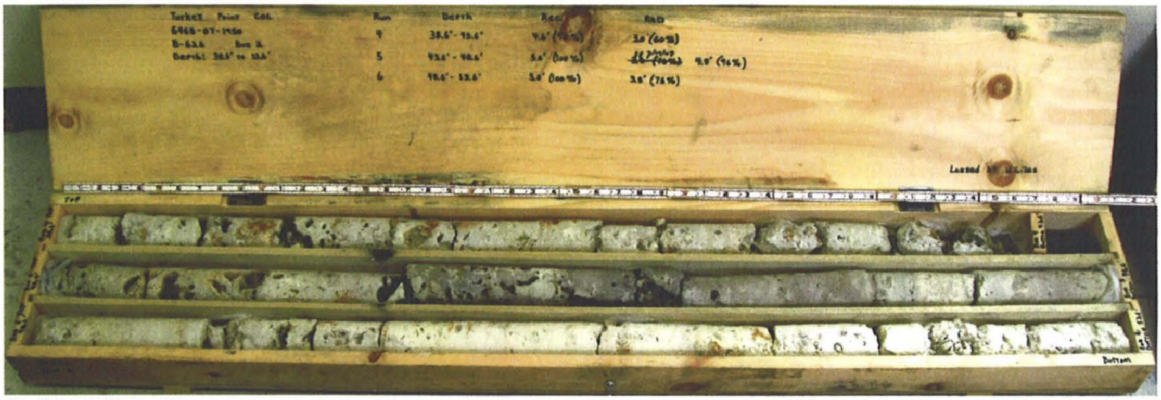
BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: J. Liles
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-550 (Miller)	DRILLER: R. White/ J. Dugger	GROUND WATER (ft)
BORING NO.: B-626	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.6 ft (NAVD88)	NORTHING: 396,875 US ft (NAD83/90)	EASTING: 876,857 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 100.6 ft	CASING DEPTH: 4" to 29.4'		HAMMER (ID): 140 lb. Auto (M06)
DATE STARTED: 3/18/08	COMPLETED: 3/20/08	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 @ 27.1 ft
-28.7	27.1	1.5	1:47	(1.5) 100%	(1.5) 100%	RUN-1	(19.7) 92%	(15.1) 70%		LIMESTONE, boundstone, white (2.5Y8/1), hard, wet, strong HCl reaction (Upper Fort Thompson Formation)
-30.2	28.6	5.0	0:41/0.5			RUN-2				27.1ft: Switch sampling method to coring *(continued)*
			0:53	(3.9) 78%	(2.7) 54%					27.1ft: white (2.5Y8/1), moderately hard, moderately indurated, fossiliferous, strong HCl reaction, few vugs
			1:03							
			1:00							
			1:15							
-35.2	33.6		0:35							
		5.0	0:42	(4.7) 94%	(3.1) 62%	RUN-3				27.5ft: loss of circulation
			0:51							28.6ft: hard, indurated
			1:03							33.6ft: moderately hard, moderately indurated, recrystallized calcite
			0:49							
-40.2	38.6		0:53							
		5.0	1:00	(4.6) 92%	(3.0) 60%	RUN-4				38.6ft: moderately indurated to indurated, little vugs
			1:18							
			0:57							
			1:03							
-45.2	43.6		1:01							
		5.0	1:01	(5.0) 100%	(4.8) 96%	RUN-5				43.6ft: white (2.5Y8/1) to 45.3ft then light gray (10YR6/1) to 48.6ft
			1:37							
			1:32							
			1:30							
-50.2	48.6		1:09							-50.2 48.6
		5.0	1:20	(5.0) 100%	(3.8) 76%	RUN-6	(30.9) 59%	(14.4) 28%		LIMESTONE, boundstone, white (2.5Y8/1), moderately hard, moderately indurated, trace vugs, fossiliferous, strong HCl reaction (Lower Fort Thompson Formation)
			0:59							
			1:02							
			0:52							
-55.2	53.6		1:00							
		5.0	0:51	(3.3) 66%	(1.0) 20%	RUN-7				
			0:47							
			0:30							
			0:43							
-60.2	58.6		1:23							
		5.0	0:36	(3.5) 70%	(1.3) 26%	RUN-8				
			1:16							
			0:32							
			0:18							
-65.2	63.6		1:08							
		5.0	0:41	(1.8) 36%	(0.9) 18%	RUN-9				63.6ft: moderately hard to hard, moderately indurated to indurated
			0:40							
			0:45							
			0:26							
-70.2	68.6		0:25							
		5.0	1:20	(1.9) 38%	(1.1) 22%	RUN-10				
			0:46							
			0:14							
			0:27							
-75.2	73.6		0:24							
		5.0	0:10	(2.4) 48%	(1.5) 30%	RUN-11				
			0:10							
			0:20							
			1:08							
-80.2	78.6		1:35							
		5.0	1;10	(1.3) 26%	(0.3) 6%	RUN-12				
			1:12							
			1:09							
			0:48							
-85.2	83.6		0:31							
		5.0	0:46	(3.5) 70%	(1.5) 30%	RUN-13				
			1:05							
			1:21							
			1:38							
-90.2	88.6		1:39							
		5.0	0:47	(2.9) 58%	(0.4) 8%	RUN-14				88.6ft: medium hard to moderately hard, friable to moderately indurated
			0:46							
			1:03							
			0:55							
-95.2	93.6		0:33							
		5.0	0:45	(3.8) 76%	(2.6) 52%	RUN-15				
			0:19							
			0:41							
			0:12							
-100.2	98.6		0:37							
		2.0	0:29	(1.5) 75%	(0.0) 0%	RUN-16				
-102.2	100.6		0:36							-102.2 100.6
										Coring Terminated at Elevation -102.2

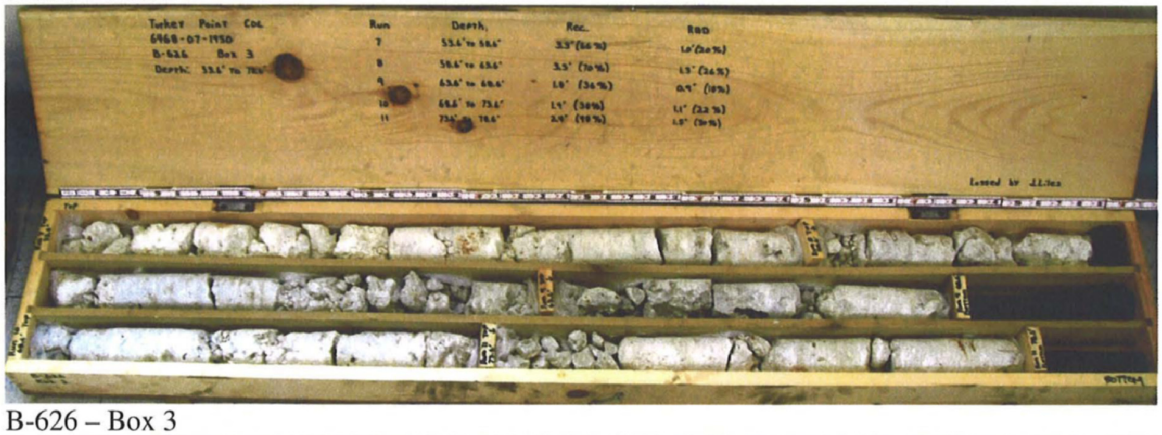
TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 7/25/08



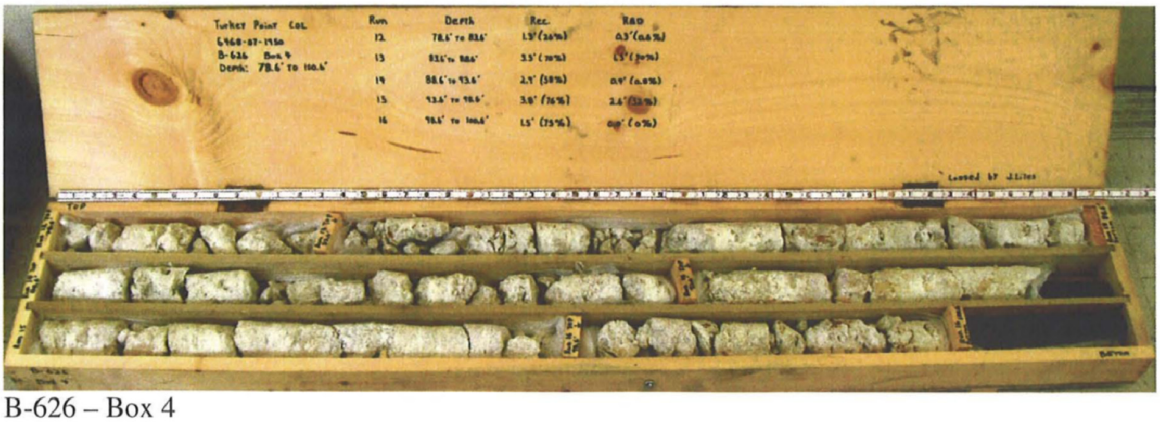
B-626 – Box 1



B-626 – Box 2



B-626 – Box 3



B-626 – 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: L. Bisson
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-550 (ATL)	DRILLER: L. Carter/ J. Landeros	GROUND WATER (ft)
BORING NO.: B-627	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.3 ft (NAVD88)	NORTHING: 396,835 US ft (NAD83/90)	EASTING: 876,333 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 102.0 ft	BORING DIAMETER: 4" to 30.0', 3" to 102.0'	CASING DEPTH: 4" to 30.0'	HAMMER (ID):140 lb. Auto (MEC-03)
DATE STARTED: 4/8/08	COMPLETED: 4/9/08	CORE SIZE: HQ3	BITS USED: 4" 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
-1.3					Ground Surface				-1.3 / 0.0
-1.3 / -3.8	0.0 / 2.5	WOR	WOR	WOR	WOR	627-1			MUCK, light brownish gray (10YR6/2), to very dark brown (10YR2/2), very soft, wet, organic, trace shell fragments
-4.2	2.9								2.5ft: Field notes do not indicate that sample 627-2 was split into separate jars
-6.3	5.0	4	3	5	8	627-2			
-8.8	7.5	8	7	6	13	627-3			LIMESTONE, boundstone, pale yellow (2.5Y8/3), to light gray (2.5Y7/1), very soft, wet, trace sand, fossiliferous, strong HCl reaction, oolitic (Miami Formation)
-11.3	10.0	14	5	6	11	627-4			5.0ft: pale yellow (2.5Y8/2)
-13.8	12.5	5	4	7	11	627-5			7.5ft: white (2.5Y8/1), to pale yellow (2.5Y8/2)
-16.3	15.0	11	9	10	19	627-6			10.0ft: pale yellow (2.5Y8/2), to light gray (2.5Y7/2)
-20.5	19.2	6	16	17	33	627-7			12.5ft: white (10YR8/1) 15.0ft: white (10YR8/1), to light gray (10YR7/1), medium hard
-25.5	24.2	4	8	4	12	627-8			19.2ft: white (10YR8/1), to very pale brown (10YR7/3), very soft
-30.5	29.2	4	20	18	38	627-9			24.2ft: white (2.5Y8/1), medium hard
-28.3	27.0								LIMESTONE, boundstone, white (2.5Y8/1), hard, wet, fossiliferous, strong HCl reaction (Upper Fort Thompson Formation)
-31.6	30.3	6	49	50/0.1	99/0.6	627-10			30.3ft: Switch sampling method to coring
-34.3	33.0					RUN-1			30.3ft: white (10YR8/1), hard, indurated, fossiliferous, trace recrystallized calcite, coralline, strong HCl reaction, few vugs
-39.3	38.0					RUN-2			33.0ft: white (10YR8/1), to light gray (2.5Y7/1), medium hard to hard
-44.3	43.0					RUN-3			38.0ft: white (2.5Y8/1), hard
-49.3	48.0					RUN-4			43.0ft: white (2.5Y8/1) to 46.0ft then gray (2.5Y6/1) to 47.5ft
-48.8	47.5								LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, fossiliferous, trace vugs, trace shell molds and cast, strong HCl reaction (Lower Fort Thompson Formation)
-54.3	53.0					RUN-5			48.0ft: trace shell molds and casts
-59.3	58.0					RUN-6			53.0ft: white (10YR8/1), moderately hard, sandy, trace to few shell molds and casts
-64.3	63.0					RUN-7			58.0ft: hard
-69.3	68.0					RUN-8			63.0ft: white (2.5Y8/1), soft to medium hard, moderately indurated
-74.3	73.0					RUN-9			68.0 to 71.0ft: fine grained sand, white (10YR8/1), to light gray (10YR7/1), unconsolidated, strong HCl reaction 71.0ft: LIMESTONE, boundstone, light gray (10YR7/1), medium hard, moderately indurated, sandy, strong HCl reaction
						RUN-10			

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: L. Bisson
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-550 (ATL)	DRILLER: L. Carter/ J. Landeros	GROUND WATER (ft)
BORING NO.: B-627	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.3 ft (NAVD88)	NORTHING: 396,835 US ft (NAD83/90)	EASTING: 876,333 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 102.0 ft	BORING DIAMETER: 4" to 30.0', 3" to 102.0'	CASING DEPTH: 4" to 30.0'	HAMMER (ID):140 lb. Auto (MEC-03)
DATE STARTED: 4/8/08	COMPLETED: 4/9/08	CORE SIZE: HQ3	BITS USED: 4" 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
-76.1					Continued from previous page				
-79.3	78.0								73.0ft: soft to medium hard, and possible thin sand lenses
						RUN-11			LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, fossiliferous, trace vugs, trace shell molds and cast, strong HCl reaction (Lower Fort Thompson Formation) *(continued)*
-84.3	83.0								78.0ft: white (10YR8/1), to light gray (10YR7/1), medium hard to moderately hard, moderately indurated to indurated, sandy, trace to few shell molds and casts
						RUN-12			
-89.3	88.0								83.0ft: moderately indurated
						RUN-13			88.0ft: white (2.5Y8/1), hard, indurated
-94.3	93.0								
						RUN-14			93.0ft: medium hard to hard, moderately indurated
-99.3	98.0								
						RUN-15			98.0ft: moderately hard, moderately indurated
									-103.3 102.0
									Boring Terminated at Elevation -103.3 ft

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

MACTEC

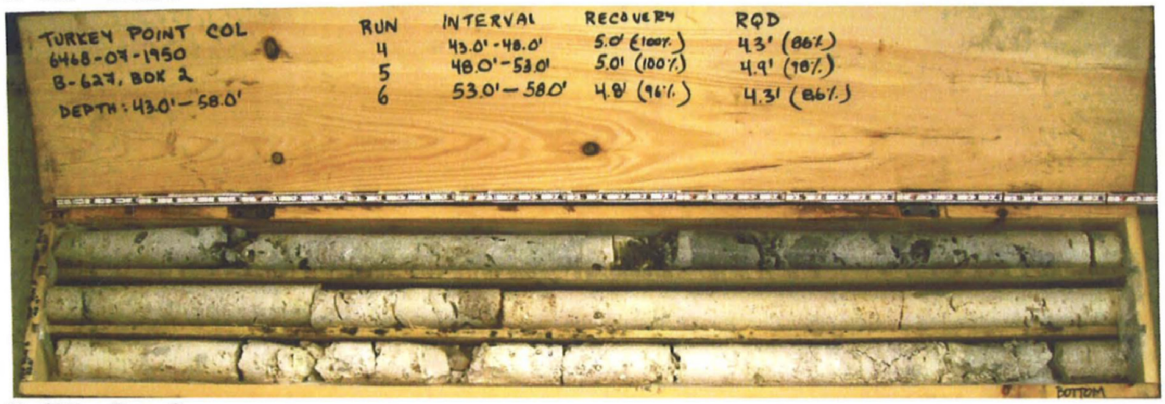
SHEET 1 OF 1

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-627	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.3 ft (NAVD88)	NORTHING: 396,835 US ft (NAD83/90)	EASTING: 876,333 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 102.0 ft	CASING DEPTH: 4" to 30.0'		HAMMER (ID): 140 lb. Auto (MEC-03)
DATE STARTED: 4/8/08	COMPLETED: 4/9/08	CORE SIZE: HQ3	CORE BARREL TYPE: Triple Tube Wireline (Split inner liners)

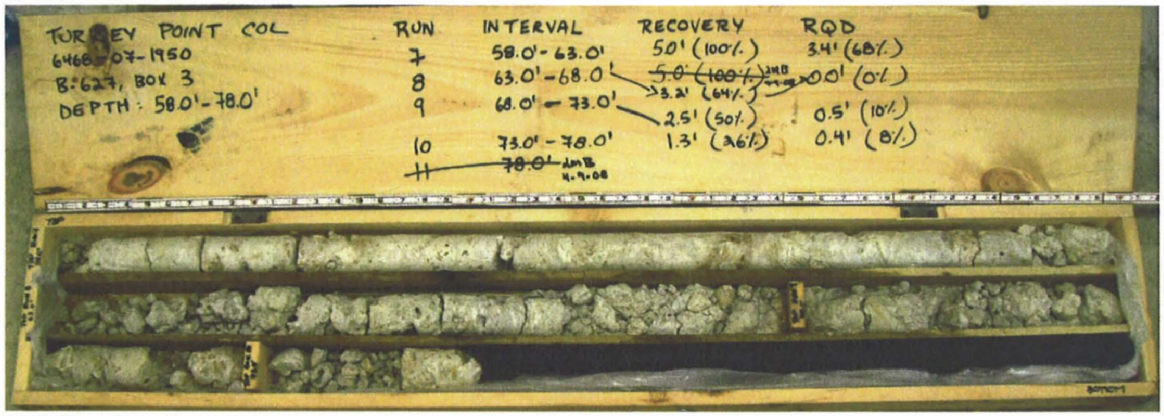
ELEV. (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS
										Begin Coring @ 30.3 ft
-31.6 -34.3	30.3 33.0	2.7	1:52 1:42 1:26/0.7	(2.7) 100%	(2.6) 96%	RUN-1	(16.1) 94%	(13.3) 77%		LIMESTONE, boundstone, white (2.5Y8/1), hard, wet, fossiliferous, strong HCl reaction (Upper Fort Thompson Formation) *(continued)* 30.3ft: white (10YR8/1), hard, indurated, fossiliferous, trace recrystallized calcite, coralline, strong HCl reaction, few vugs 33.0ft: white (10YR8/1), to light gray (2.5Y7/1), medium hard to hard
-39.3	38.0	5.0	2:15 1:30 1:35 1:22 0:56	(4.5) 90%	(2.8) 56%	RUN-2				
-44.3	43.0	5.0	1:46 1:27 1:41 1:51 1:35	(4.4) 88%	(4.2) 84%	RUN-3				38.0ft: white (2.5Y8/1), hard
-49.3	48.0	5.0	1:35 2:25 1:57 2:17 1:55	(5.0) 100%	(4.3) 86%	RUN-4				43.0ft: white (2.5Y8/1) to 46.0ft then gray (2.5Y6/1) to 47.5ft -48.8 47.5
-54.3	53.0	5.0	1:12 0:52 1:32 1:16 1:16	(5.0) 100%	(4.9) 98%	RUN-5	(42.7) 78%	(26.3) 48%		LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, fossiliferous, trace vugs, trace shell molds and cast, strong HCl reaction (Lower Fort Thompson Formation) 48.0ft: trace shell molds and casts
-59.3	58.0	5.0	0:48 1:12 2:07 1:04 1:07	(4.8) 96%	(4.3) 86%	RUN-6				53.0ft: white (10YR8/1), moderately hard, sandy, trace to few shell molds and casts
-64.3	63.0	5.0	0:53 1:34 2:12 1:22 0:47	(5.0) 100%	(3.4) 68%	RUN-7				58.0ft: hard
-69.3	68.0	5.0	0:21 0:22 0:22 0:25 0:45	(3.2) 64%	(0.0) 0%	RUN-8				63.0ft: white (2.5Y8/1), soft to medium hard, moderately indurated
-74.3	73.0	5.0	0:03 0:04 0:08 0:36 1:45	(2.5) 50%	(0.5) 10%	RUN-9				68.0 to 71.0ft: fine grained sand, white (10YR8/1), to light gray (10YR7/1), unconsolidated, strong HCl reaction 71.0ft: LIMESTONE, boundstone, light gray (10YR7/1), medium hard, moderately indurated, sandy, strong HCl reaction
-79.3	78.0	5.0	0:21 0:08 0:22 0:16 0:08	(1.3) 26%	(0.4) 8%	RUN-10				73.0ft: soft to medium hard, and possible thin sand lenses
-84.3	83.0	5.0	0:58 1:07 1:25 0:59 1:02	(4.3) 86%	(2.5) 50%	RUN-11				78.0ft: white (10YR8/1), to light gray (10YR7/1), medium hard to moderately hard, moderately indurated to indurated, sandy, trace to few shell molds and casts
-89.3	88.0	5.0	1:43 0:06 0:26 1:55 2:45	(4.0) 80%	(2.2) 44%	RUN-12				83.0ft: moderately indurated
-94.3	93.0	5.0	1:01 1:13 1:15 1:13 0:41	(5.0) 100%	(4.0) 80%	RUN-13				88.0ft: white (2.5Y8/1), hard, indurated
-99.3	98.0	5.0	0:05 0:32 0:43 1:04 1:02	(3.3) 66%	(2.0) 40%	RUN-14				93.0ft: medium hard to hard, moderately indurated
-103.3	102.0	4.0	0:53 0:37 0:49 0:32	(3.8) 95%	(1.6) 40%	RUN-15				98.0ft: moderately hard, moderately indurated -103.3 102.0
										Coring Terminated at Elevation -103.3

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

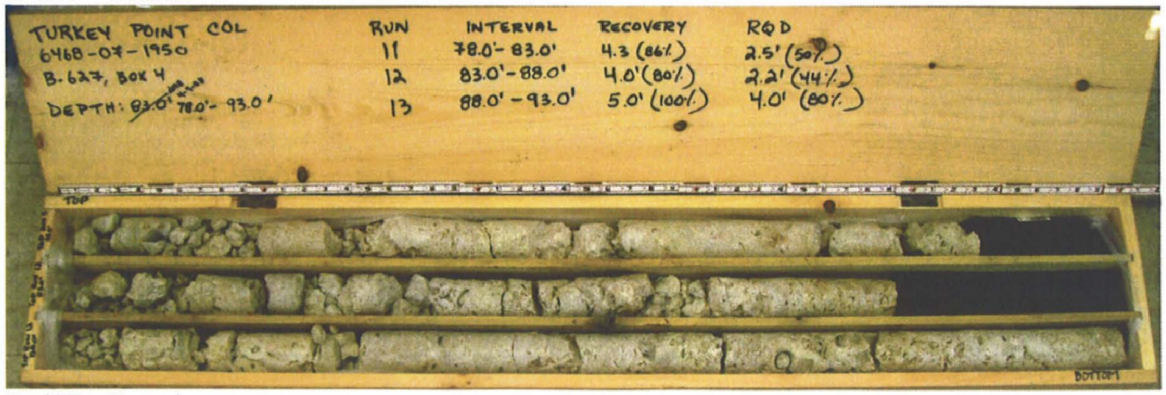
B-627 – Box 1



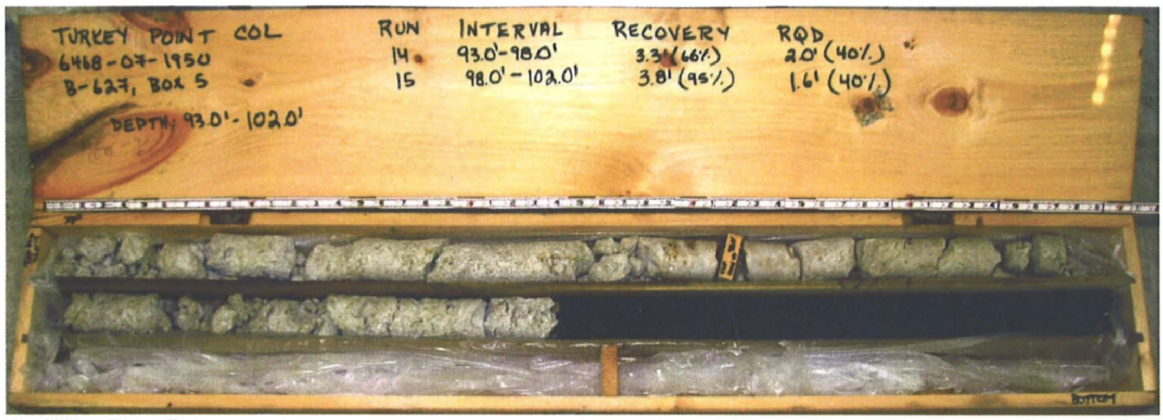
B-627 – Box 2



B-627 – Box 3



B-627 – Box 4


TURKEY POINT COL
6468-07-1950
B-627, Box 5
DEPTH: 93.0'-102.0'
RUN
14
15
INTERVAL
93.0'-98.0'
98.0'-102.0'
RECOVERY
3.3' (66%)
3.8' (95%)
RQD
2.0' (40%)
1.6' (40%)

B-627 – Box 5