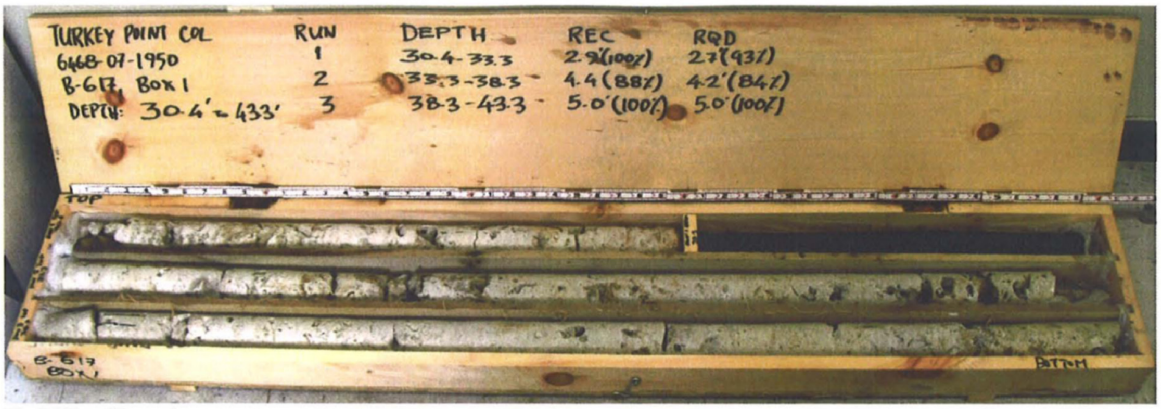
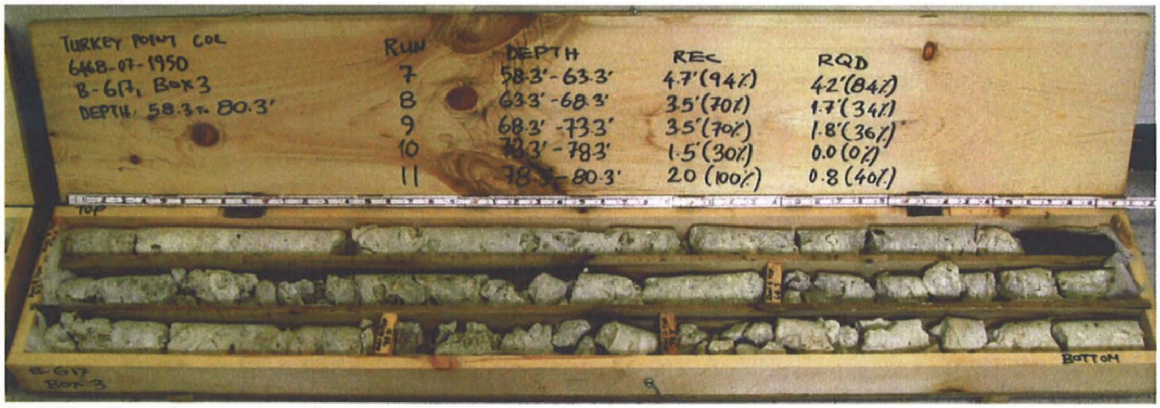


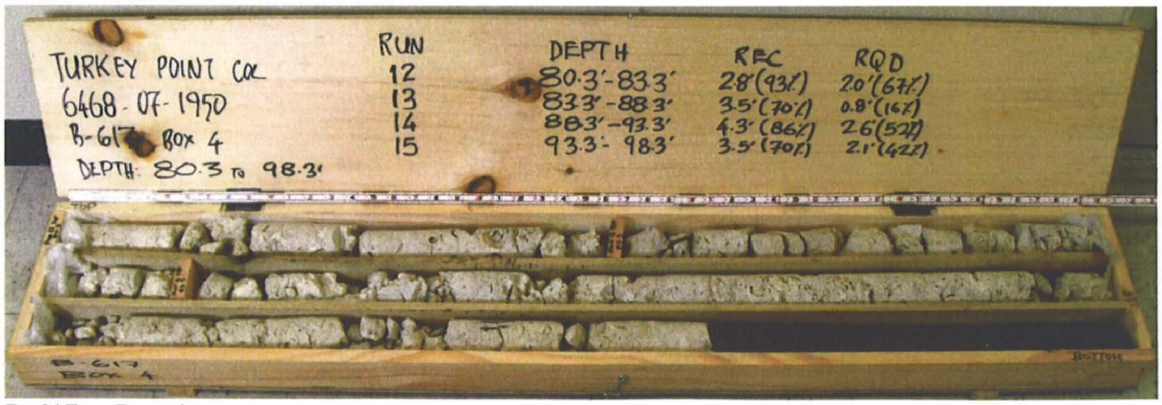
B-617 – Box 1



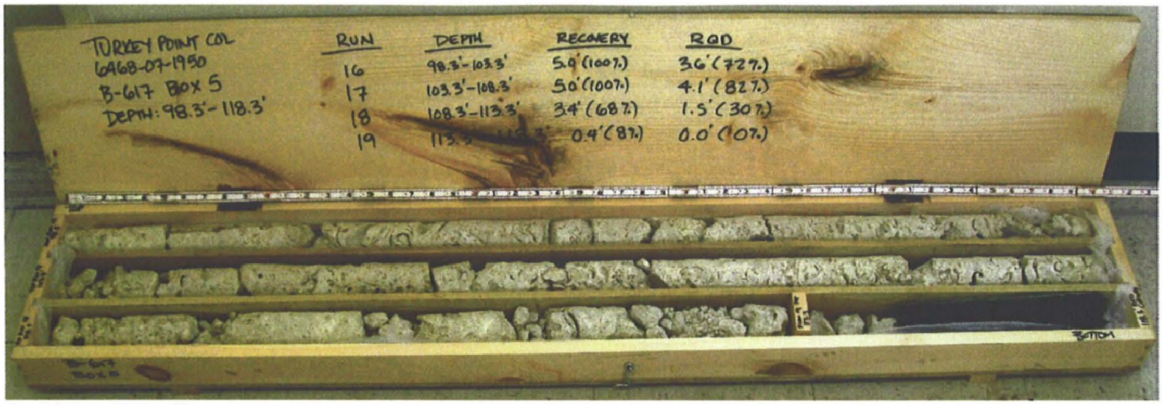
B-617 – Box 2



B-617 – Box 3



B-617 – Box 4


TURKEY POINT COL
6468-07-1950
B-617 Box 5
DEPTH: 98.3'-118.3'
RUN
DEPTH
RECOVERY
RQD
16
98.3'-103.3'
5.0'(100%)
3.6'(72%)
17
103.3'-108.3'
5.0'(100%)
4.1'(82%)
18
108.3'-113.3'
3.4'(68%)
1.5'(30%)
19
0.4'(8%)
0.0'(0%)

B-617 – Box 5

MACTEC

GEOTECHNICAL BORING LOG

Prepared By GDR Date 5-30-08

Checked By TMM Date 5-31-08

SHEET 1 OF 3

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. White/ R. Hall	GROUND WATER (ft)
BORING NO.: B-618	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.4 ft (NAVD88)	NORTHING: 397,208 US ft (NAD83/90)	EASTING: 876,643 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 154.7 ft	BORING DIAMETER: 4" to 28.8', 3" to 154.7'	CASING DEPTH: 4" to 28.8', 3" to 133.2'	HAMMER (ID):140 lb. Auto (MEC-12)
DATE STARTED: 2/22/08	COMPLETED: 3/4/08	CORE SIZE: HQ3	BITS USED: 2 15/16" Tricone

ELEV. (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 20 40 60 80 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-1.4					Ground Surface				
-1.4	0.0	WOH	WOH	WOH	WOH 0	618-1			-1.4 0.0 MUCK, very dark grayish brown (2.5Y3/2), very soft, wet, trace peat
-4.2	2.8	3	3	4	7	618-2			-4.4 3.0 Field notes do not indicate that sample 618-2 was split into separate jars
-6.1	4.7	6	6	6	12	618-3			LIMESTONE, boundstone, white (10YR8/1), very soft, wet, few to little sand, trace organics, friable, oolitic, trace organics (Miami Formation)
-8.8	7.4	9	5	4	9	618-4			7.4ft: trace sand
-11.4	10.0	10	10	13	23	618-5			10.0ft: soft
-13.9	12.5	19	10	9	19	618-6			12.5ft: very soft
-16.2	14.8	8	7	29	36	618-7			14.8ft: medium hard, moderately indurated
-18.2	16.8	13	8	5	13	618-8			16.8ft: very soft
-23.4	22.0	3	2	2	4	618-9			22.0ft: friable
-26.4	25.0								-26.4 25.0 LIMESTONE, boundstone, white (10YR8/1), to pale yellow (2.5Y8/2), hard, wet, indurated (Upper Fort Thompson Formation)
-28.3	26.9								
-29.2	27.8	31	50/0.4		81/0.9	618-10			27.8ft: switch sampling method to coring
-31.7	30.3					RUN-1			27.8ft: white (5Y8/1), to light greenish gray (5GY8/1), hard, indurated, coralline, fossiliferous, strong HCl reaction, trace to few vugs
-36.7	35.3					RUN-2			29.0ft: loss of circulation
-41.7	40.3					RUN-3			30.3ft: light greenish gray (5GY8/1) 35.3ft: white (5Y8/1)
-46.7	45.3					RUN-4			40.3ft: white (N8/), hard to moderately hard, recrystallized calcite
-49.1	47.7					RUN-5			45.3 to 47.7ft: gray (N6/)
-51.7	50.3								-49.1 47.7 LIMESTONE, boundstone, white (5Y8/1), hard, indurated, fossiliferous with few shell molds and casts, trace vugs, strong HCl reaction (Lower Fort Thompson Formation)
-56.7	55.3					RUN-6			
-61.7	60.3					RUN-7			
-66.7	65.3					RUN-8			60.3ft: indurated to friable, trace sand
-67.5	66.1					RUN-9			65.3ft: indurated
-71.7	70.3					RUN-10			66.1ft: moderately indurated
						RUN-11			70.3ft: trace to few sand

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: O. Rodriguez
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-45C (RAL)	DRILLER: D. White/ R. Hall	GROUND WATER (ft)
BORING NO.: B-618	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.4 ft (NAVD88)	NORTHING: 397,208 US ft (NAD83/90)	EASTING: 876,643 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 154.7 ft	BORING DIAMETER: 4" to 28.8', 3" to 154.7'	CASING DEPTH: 4" to 28.8', 3" to 133.2'	HAMMER (ID):140 lb. Auto (MEC-12)
DATE STARTED: 2/22/08	COMPLETED: 3/4/08	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				
-76.7	75.3					RUN-12			LIMESTONE, boundstone, white (5Y8/1), hard, indurated, fossiliferous with few shell molds and casts, trace vugs, strong HCl reaction (Lower Fort Thompson Formation) *(continued)*
-80.5	79.1								75.3ft: indurated
-81.7	80.3					RUN-13			
						RUN-14			80.3ft: moderately indurated to indurated, little shell molds and casts
-86.7	85.3								
						RUN-15			
-91.7	90.3								
						RUN-16			
-96.7	95.3								
						RUN-17			95.3ft: indurated, few to little shell molds and casts
-101.7	100.3								
						RUN-18			100.3ft: hard to moderately hard, moderately indurated, little to some shell molds and casts
-106.7	105.3								
						RUN-19			
-111.7	110.3								
						RUN-20			110.3ft: moderately hard, friable to moderately indurated
-116.7	115.3								
						RUN-21			-117.4 115.3ft: moderately indurated 116.0
-124.6	123.2								116.0ft: Silty SAND (SM), light gray (2.5Y7/2), loose, wet, trace limestone fragments (Tamiami Formation)
		3	3	4	7	618-11			123.2ft: Switch sampling method to SPT
-129.6	128.2								
		2	4	5	9	618-12			128.2ft: greenish gray (10Y6/1), friable to moderately indurated cemented sand fragments
-134.6	133.2								
		3	6	3	9	618-13			
-139.6	138.2								
		6	10	9	19	618-14			138.2ft: medium dense
-144.6	143.2								
		4	9	12	21	618-15			
-149.6	148.2								
		4	5	10	15	618-16			

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. White/ R. Hall	GROUND WATER (ft)	
BORING NO.: B-618	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA	
GROUND ELEV.: -1.4 ft (NAVD88)	NORTHING: 397,208 US ft (NAD83/90)	EASTING: 876,643 US ft (NAD83/90)	24 HR. NA	
TOTAL DEPTH: 154.7 ft	BORING DIAMETER: 4" to 28.8', 3" to 154.7'	CASING DEPTH: 4" to 28.8', 3" to 133.2'	HAMMER (ID):140 lb. Auto (MEC-12)	
DATE STARTED: 2/22/08	COMPLETED: 3/4/08	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
-151.0					Continued from previous page				
-154.6	153.2	4	6	9	15	618-17			116.0ft: Silty SAND (SM), light gray (2.5Y7/2), loose, wet, trace limestone fragments (Tamiami Formation) *(continued)*
-156.1	154.7								153.2ft: trace shell fragments Boring Terminated at Elevation -156.1 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: O. Rodriguez
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-45C (RAL)	DRILLER: D. White/ R. Hall	GROUND WATER (ft)
BORING NO.: B-618	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.4 ft (NAVD88)	NORTHING: 397,208 US ft (NAD83/90)	EASTING: 876,643 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 154.7 ft	CASING DEPTH: 4" to 28.8', 3" to 133.2'		HAMMER (ID): 140 lb. Auto (MEC-12)
DATE STARTED: 2/22/08	COMPLETED: 3/4/08	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 @ 27.8 ft
-29.2	27.8	2.5	0:55 3:06 2:00/0.5	(1.7) 68%	(0.7) 28%	RUN-1	(18.1) 91%	(15.0) 75%		LIMESTONE, boundstone, white (10YR8/1), to pale yellow (2.5Y8/2), hard, wet, indurated (Upper Fort Thompson Formation) 27.8ft: switch sampling method to coring *(continued)* 27.8ft: white (5Y8/1), to light greenish gray (5GY8/1), hard, indurated, coralline, fossiliferous, strong HCl reaction, trace to few vugs
-31.7	30.3									
-36.7	35.3	5.0	2:18 1:17 1:20 1:11 1:32	(4.1) 82%	(3.4) 68%	RUN-2				29.0ft: loss of circulation
-41.7	40.3	5.0	1:36 2:01 3:05 2:15 1:55	(5.0) 100%	(4.0) 80%	RUN-3				30.3ft: light greenish gray (5GY8/1) 35.3ft: white (5Y8/1)
-46.7	45.3	5.0	2:35 1:51 1:41 1:17 1:09	(4.9) 98%	(4.5) 90%	RUN-4				40.3ft: white (N8/), hard to moderately hard, recrystallized calcite
-51.7	50.3	5.0	2:27 1:46 1:57 1:47 1:41	(5.0) 100%	(5.0) 100%	RUN-5				45.3 to 47.7ft: gray (N6/)
-56.7	55.3	5.0	1:49 2:11 1:20 1:09 0:45	(5.0) 100%	(5.0) 100%	RUN-6	(49.2) 72%	(28.4) 42%		LIMESTONE, boundstone, white (5Y8/1), hard, indurated, fossiliferous with few shell molds and casts, trace vugs, strong HCl reaction (Lower Fort Thompson Formation)
-61.7	60.3	5.0	1:28 1:44 1:18 1:47 1:32	(4.7) 94%	(4.0) 80%	RUN-7				
-66.7	65.3	5.0	1:29 1:42 1:41 1:32 1:48	(3.8) 76%	(2.3) 46%	RUN-8				60.3ft: indurated to friable, trace sand
-67.5	66.1	0.8	2:35/0.8	(0.6) 75%	(0.0) 0%	RUN-9				65.3ft: indurated 66.1ft: moderately indurated
-71.7	70.3	4.2	1:30/0.2 2:35 2:14 1:25	(2.5) 60%	(0.9) 21%	RUN-10				
-76.7	75.3	5.0	1:20 0:57 1:12 1:03 1:05 0:57	(2.3) 46%	(0.4) 8%	RUN-11				70.3ft: trace to few sand
-80.5	79.1	3.8	1:13 1:26 1:55 1:49/0.8	(3.3) 87%	(1.6) 42%	RUN-12				75.3ft: indurated
-81.7	80.3	1.2	1:41/0.2	(1.2) 100%	(1.1) 92%	RUN-13				
-86.7	85.3	5.0	3:41 1:33 0:48 0:46 0:34 1:05	(3.0) 60%	(2.2) 44%	RUN-14				80.3ft: moderately indurated to indurated, little shell molds and casts
-91.7	90.3	5.0	1:06 1:19 1:33 0:49 0:43	(2.7) 54%	(0.6) 12%	RUN-15				
-96.7	95.3	5.0	0:58 0:46 0:47 1:23 0:53	(4.1) 82%	(2.1) 42%	RUN-16				
-101.7	100.3	5.0	0:57 0:36 0:39 0:44 0:49	(4.0) 80%	(2.3) 46%	RUN-17				95.3ft: indurated, few to little shell molds and casts
		5.0	1:10 1:18	(4.2) 84%	(2.2) 44%	RUN-18				100.3ft: hard to moderately hard, moderately indurated, little to some shell molds and casts

-49.1 47.7

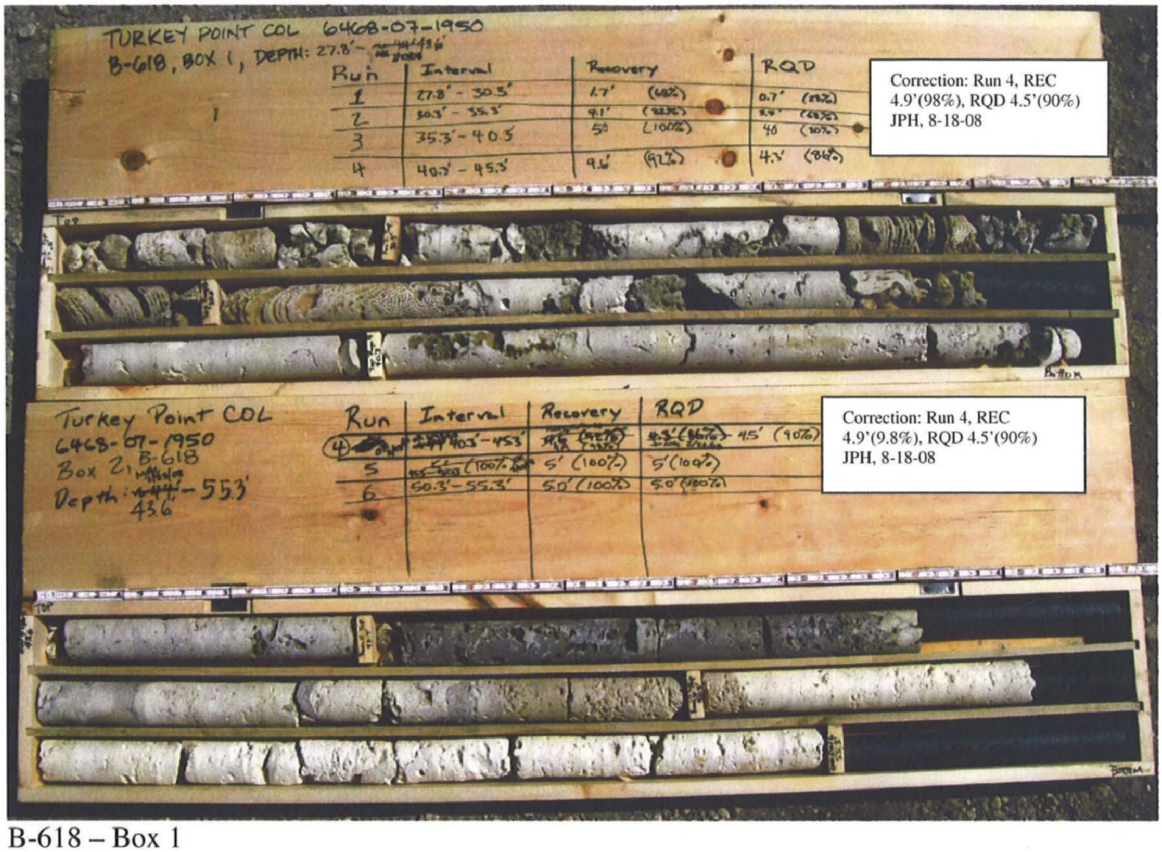
TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 5/30/08

MACTEC

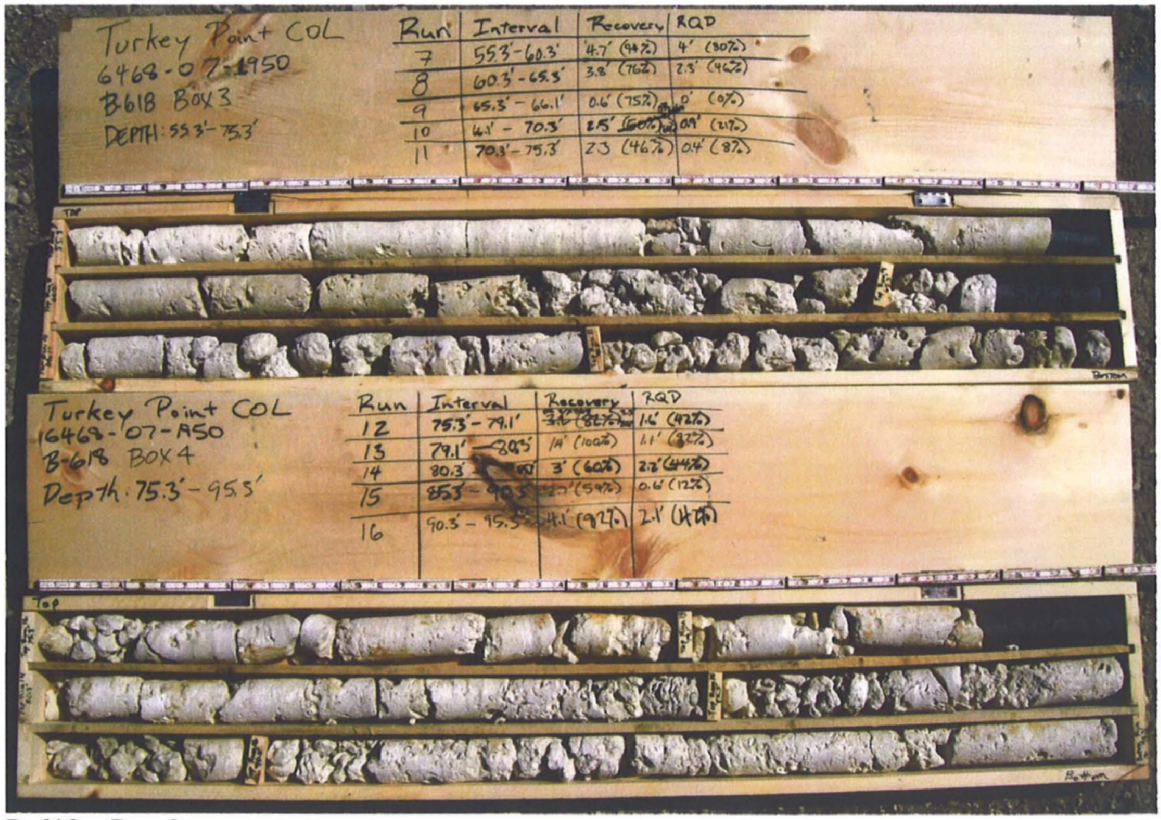
BECHTEL PROJECT NO.: 25409	MACTEC PROJECT NO.: 6468-07-1950	COUNTY: Miami-Dade	GEOLOGIST: O. Rodriguez
SITE DESCRIPTION: Turkey Point COL	DRILL MACHINE: CME-45C (RAL)	DRILLER: D. White/ R. Hall	GROUND WATER (ft)
BORING NO.: B-618	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.4 ft (NAVD88)	NORTHING: 397,208 US ft (NAD83/90)	EASTING: 876,643 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 154.7 ft	CASING DEPTH: 4" to 28.8', 3" to 133.2'		HAMMER (ID): 140 lb. Auto (MEC-12)
DATE STARTED: 2/22/08	COMPLETED: 3/4/08	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
-106.7	105.3		0:33 1:22 2:28							LIMESTONE, boundstone, white (5Y8/1), hard, indurated, fossiliferous with few shell molds and casts, trace vugs, strong HCl reaction (Lower Fort Thompson Formation) *(continued)*
-111.7	110.3	5.0	1:26 1:24 0:47 1:24 2:10	(3.0) 60%	(0.7) 14%	RUN-19				
-116.7	115.3	5.0	0:44 1:11 0:30 1:02 0:43	(1.9) 38%	(0.4) 8%	RUN-20				110.3ft: moderately hard, friable to moderately indurated
-121.7	120.3	5.0	0:17 0:14 0:55 0:55 0:19	(0.3) 6%	(0.0) 0%	RUN-21	(0.0) 0%	(NA)		-117.4 115.3ft: moderately indurated 116.0 116.0ft: Silty SAND (SM), light gray (2.5Y7/2), loose, wet, trace limestone fragments (Tamiami Formation) -121.7 120.3 Coring Terminated at Elevation -121.7

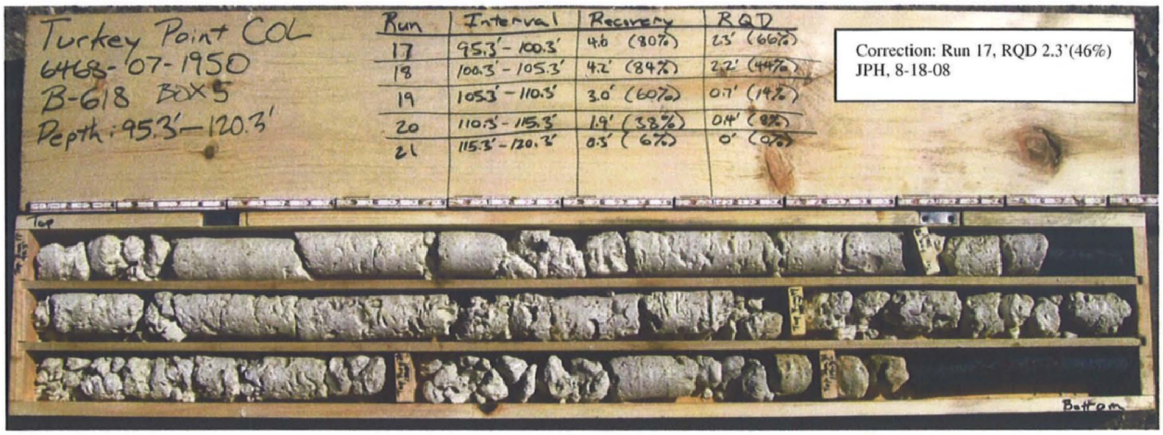
TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 5/30/08



B-618 – Box 1
B-618 – Box 2



B-618 – Box 3
B-618 – Box 4


Turkey Point COL
6468-07-1950
B-618 Box 5
Depth: 95.3'–120.3'
Run | Interval | Recovery | RQD
17 | 95.3'–100.3' | 4.0 (80%) | 2.3' (66%)
18 | 100.3'–105.3' | 4.2' (84%) | 2.2' (44%)
19 | 105.3'–110.3' | 3.0' (60%) | 0.7' (14%)
20 | 110.3'–115.3' | 1.9' (38%) | 0.4' (8%)
21 | 115.3'–120.3' | 0.3' (6%) | 0' (0%)
Correction: Run 17, RQD 2.3'(46%)
JPH, 8-18-08
Top
Bottom

B-618 – Box 5

MACTEC

GEOTECHNICAL BORING LOG

Prepared By JPPE Date 8-19-08

Checked By SSR Date 8/19/08

SHEET 1 OF 2

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-619	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.7 ft (NAVD88)	NORTHING: 397,294 US ft (NAD83/90)	EASTING: 876,654 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 128.7 ft	BORING DIAMETER: 4" to 13.6', 3" to 128.7'	CASING DEPTH: 4" to 13.6', 3" to 118.2'	HAMMER (ID):140 lb. Auto (MEC-12)
DATE STARTED: 3/6/08	COMPLETED: 3/9/08	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
-1.7					Ground Surface				
-1.7	0.0	WOH	WOH	WOH	WOH 0	619-1			MUCK, very dark grayish brown (2.5Y3/2), very soft, wet, mostly organic
-4.5	2.8								
-5.2	3.5	WOH	5	9	14	619-2			LIMESTONE, boundstone, gray (N6/), very soft, wet, friable, trace to few coarse to fine grained sand, oolitic (Miami Formation)
-6.8	5.1				SEE LEGEND FOR ROCK HARDNESS CRITERIA BASED ON SPT DATA				
-8.8	7.1	4	20	12	32	619-3			5.1ft: light gray (N7/), medium hard
-11.4	9.7	10	6	3	9	619-4			7.1ft: white (2.5Y8/1), very soft
-13.8	12.1	6	10	12	22	619-5			9.7ft: soft
-16.4	14.7	11	14	10	24	619-6			14.7ft: hard
-17.9	16.2	15	10	50/0.5	60/1.0	619-7			
-18.4	16.7					RUN-1			16.2ft: Switch sampling method to coring
						RUN-2			16.2ft: (2.5Y8/1), moderately hard, indurated, oolitic, strong HCl reaction
-23.4	21.7					RUN-3			16.7ft: soft to moderately hard, friable to indurated, fossiliferous, few vugs
-26.7	25.0								
-28.4	26.7					RUN-4			LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, fossiliferous, coralline, strong HCl reaction, few vugs (Upper Fort Thompson Formation)
						619-CS-01			25.0 to 30.0ft: loss of circulation
-33.4	31.7					RUN-5			
-38.4	36.7					RUN-6			
-43.4	41.7					RUN-7			41.7ft: white (2.5Y8/1), to 45.7ft then bluish gray (5PB5/1)
-48.4	46.7					RUN-8			46.7 to 48.2ft: bluish gray (5PB6/1)
-49.9	48.2								
-53.4	51.7					619-CS-02			LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, fossiliferous, few shell molds and casts, strong HCl reaction, few vugs (Lower Fort Thompson Formation)
						RUN-9			51.7ft: trace sand and shell molds
-58.4	56.7					RUN-10			
-63.4	61.7					RUN-11			
-68.4	66.7					RUN-12			
-73.4	71.7					RUN-13			71.7ft: few shell molds

TURKEY POINT COL BORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 8/18/08

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-619	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.7 ft (NAVD88)	NORTHING: 397,294 US ft (NAD83/90)	EASTING: 876,654 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 128.7 ft	BORING DIAMETER: 4" to 13.6', 3" to 128.7'	CASING DEPTH: 4" to 13.6', 3" to 118.2'	HAMMER (ID):140 lb. Auto (MEC-12)
DATE STARTED: 3/6/08	COMPLETED: 3/9/08	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
-76.5					Continued from previous page				
-78.4	76.7					RUN-14			LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, fossiliferous, few shell molds and casts, strong HCl reaction, few vugs (Lower Fort Thompson Formation) *(continued)*
-83.3	81.6					RUN-15			76.7ft: trace to few shell molds, trace to few sand, few vugs
-88.3	86.6					RUN-16			86.6ft: moderately hard to hard, moderately indurated to indurated
-93.3	91.6					RUN-17			91.6ft: hard, indurated
-98.3	96.6					RUN-18			96.6ft: moderately hard to hard, moderately indurated to indurated
-103.3	101.6					RUN-19			101.6ft: trace sand, little shell molds and casts
-108.3	106.6					RUN-20			106.6ft: indurated to moderately indurated, few sand, few shell molds and casts, few to little vugs
-113.3	111.6					RUN-21			111.6ft: moderately hard, moderately indurated, few to little sand
-116.7	115.0								Silty SAND (SM), white (2.5Y8/1), wet, and moderately hard, fine to coarse grained sand, fine gravel sized moderately indurated limestone/cemented sand fragments (Tamiami Formation)
-118.3	116.6					RUN-22			
-123.3	121.6	8	4	3	7	619-8			121.6ft: Switch sampling methods to SPT 121.6ft: pale yellow (2.5Y8/3), loose, wet, little fines, fine grained sand, trace shell fragments
-128.9	127.2	3	8	8	16	619-9			127.2ft: trace cemented sand fragments, shell fragments
-130.4	128.7								Boring Terminated at Elevation -130.4 ft

TURKEY POINT COL BORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 8/18/08

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-619	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.7 ft (NAVD88)	NORTHING: 397,294 US ft (NAD83/90)	EASTING: 876,654 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 128.7 ft	CASING DEPTH: 4" to 13.6', 3" to 118.2'		HAMMER (ID): 140 lb. Auto (MEC-12)
DATE STARTED: 3/6/08	COMPLETED: 3/9/08	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 @ 16.2 ft
-17.9	16.2	0.5	5:22/0.5	(0.5)	(0.4)	RUN-1	(1.5)	(0.4)		LIMESTONE, boundstone, gray (N6/), very soft, wet, friable, trace to few coarse to fine grained sand, oolitic (Miami Formation) *(continued)*
-18.4	16.7	5.0	0:44	100%	80%	RUN-2	17%	5%		16.2ft: (2.5Y8/1), moderately hard, indurated, oolitic, strong HCl reaction
			0:55	(1.0)	(0.0)					
			1:18	20%	0%					
-23.4	21.7		0:45							16.7ft: soft to moderately hard, friable to indurated, fossiliferous, few vugs
			0:50							
		5.0	0:24	(1.7)	(0.7)	RUN-3				
			0:34	34%	14%					
			0:28							
			2:28							-26.7 25.0
-28.4	26.7		0:58				(22.8)	(18.2)		LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, fossiliferous, coralline, strong HCl reaction, few vugs (Upper Fort Thompson Formation)
		5.0	1:47	(5.0)	(4.5)	RUN-4	98%	78%		25.0 to 30.0ft: loss of circulation
			1:25	100%	90%					
			0:50			*619-CS-01*				
			0:51							
-33.4	31.7		1:34							
		5.0	1:37	(5.0)	(3.5)	RUN-5				
			1:00	100%	70%					
			0:51							
			0:48							
-38.4	36.7		0:48							
		5.0	1:06	(5.0)	(3.8)	RUN-6				
			0:53	100%	76%					
			1:03							
			1:59							
-43.4	41.7		2:09							
		5.0	1:56	(4.6)	(4.2)	RUN-7				41.7ft: white (2.5Y8/1), to 45.7ft then bluish gray (5PB5/1)
			0:20	92%	84%					
			1:59							
			1:38							
-48.4	46.7		1:13							
		5.0	1:38	(5.0)	(5.0)	RUN-8				-49.9 46.7 to 48.2ft: bluish gray (5PB6/1) 48.2
			0:50	100%	100%					
			1:01				(40.9)	(19.5)		LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, fossiliferous, few shell molds and casts, strong HCl reaction, few vugs (Lower Fort Thompson Formation)
			1:09			*619-CS-02*	61%	29%		
-53.4	51.7		0:59							
		5.0	0:47	(3.0)	(1.8)	RUN-9				51.7ft: trace sand and shell molds
			0:42	60%	36%					
			0:29							
			0:33							
-58.4	56.7		0:20							
		5.0	1:00	(3.6)	(2.3)	RUN-10				
			1:00	72%	46%					
			0:59							
			1:04							
-63.4	61.7		0:57							
		5.0	1:20	(1.9)	(0.0)	RUN-11				
			0:50	38%	0%					
			0:54							
			0:30							
-68.4	66.7		0:26							
		5.0	1:06	(2.8)	(1.6)	RUN-12				
			0:38	56%	32%					
			0:41							
			0:08							
-73.4	71.7		1:23							
		5.0	1:32	(3.2)	(1.3)	RUN-13				71.7ft: few shell molds
			1:25	64%	26%					
			1:16							
			0:39							
-78.4	76.7		0:54							
		4.9	1:23	(3.7)	(1.5)	RUN-14				76.7ft: trace to few shell molds, trace to few sand, few vugs
			1:14	76%	31%					
			1:03							
			1:17							
-83.3	81.6		1:16/0.9							
		5.0	1:10	(3.3)	(1.2)	RUN-15				
			0:46	66%	24%					
			0:56							
			0:32							
-88.3	86.6		0:34							
		5.0	0:41	(1.5)	(0.0)	RUN-16				86.6ft: moderately hard to hard, moderately indurated to indurated
			0:45	30%	0%					
			1:01							
			2:08							

TURKEY POINT COL CORE TURKEY POINT GPJ TURKEY POINT COL.GDT 8/18/08

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-619	DRILL METHOD: Mud Rotary/ Core	SAMPLE METHODS: SPT/Core	0 HR. NA
GROUND ELEV.: -1.7 ft (NAVD88)	NORTHING: 397,294 US ft (NAD83/90)	EASTING: 876,654 US ft (NAD83/90)	24 HR. NA
TOTAL DEPTH: 128.7 ft	CASING DEPTH: 4" to 13.6', 3" to 118.2'		HAMMER (ID): 140 lb. Auto (MEC-12)
DATE STARTED: 3/6/08	COMPLETED: 3/9/08	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
										Continued from previous page
-93.3	91.6	5.0	1:21 1:51 2:14 0:50 1:40 1:20	(2.8) 56%	(2.0) 40%	RUN-17				LIMESTONE, boundstone, white (2.5Y8/1), hard, indurated, fossiliferous, few shell molds and casts, strong HCl reaction, few vugs (Lower Fort Thompson Formation) *(continued)* 91.6ft: hard, indurated
-98.3	96.6	5.0	1:52 0:47 0:44 0:42 2:50 1:80	(2.1) 42%	(1.3) 26%	RUN-18				96.6ft: moderately hard to hard, moderately indurated to indurated
-103.3	101.6	5.0	1:00 1:12 0:52 0:47 2:14	(4.2) 84%	(1.9) 38%	RUN-19				101.6ft: trace sand, little shell molds and casts
-108.3	106.6	5.0	0:56 0:59 1:02 1:10 2:31	(3.3) 66%	(1.1) 22%	RUN-20				106.6ft: indurated to moderately indurated, few sand, few shell molds and casts, few to little vugs
-113.3	111.6	5.0	1:09 1:27 1:57 1:53 1:01	(2.0) 40%	(0.0) 0%	RUN-21				111.6ft: moderately hard, moderately indurated, few to little sand
-116.7	115.0									
-118.3	116.6						(1.2) 18%	(NA)		Silty SAND (SM), white (2.5Y8/1), wet, and moderately hard, fine to coarse grained sand, fine gravel sized moderately indurated limestone/cemented sand fragments (Tamiami Formation)
-123.3	121.6	5.0	0:49 0:26 0:32 0:46 1:14	(1.2) 24%	(0.0) 0%	RUN-22				
-123.3	121.6									Coring Terminated at Elevation -123.3

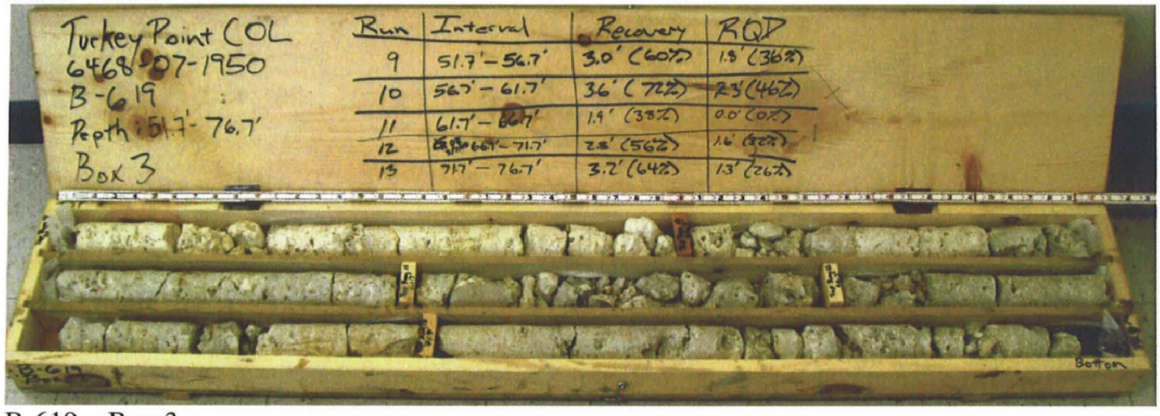
TURKEY POINT COL CORE TURKEY POINT.GPJ TURKEY POINT COL.GDT 8/18/08



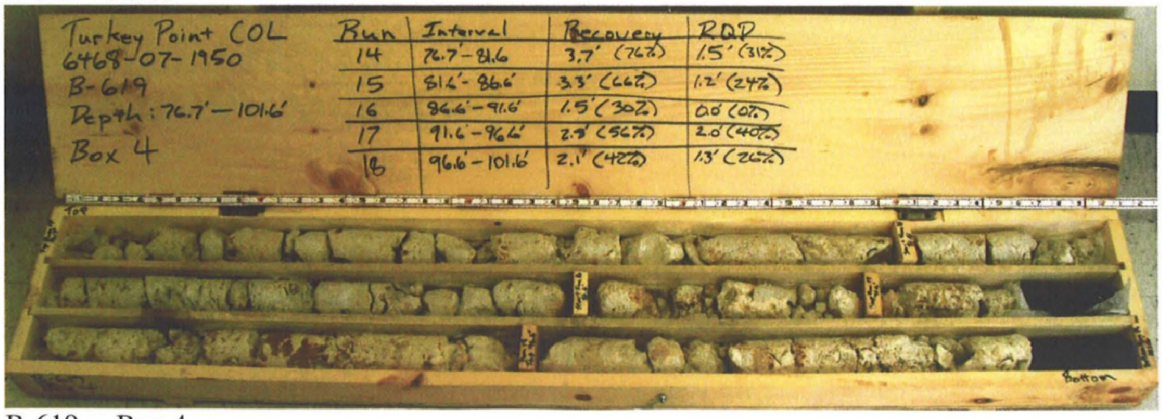
B-619 – Box 1



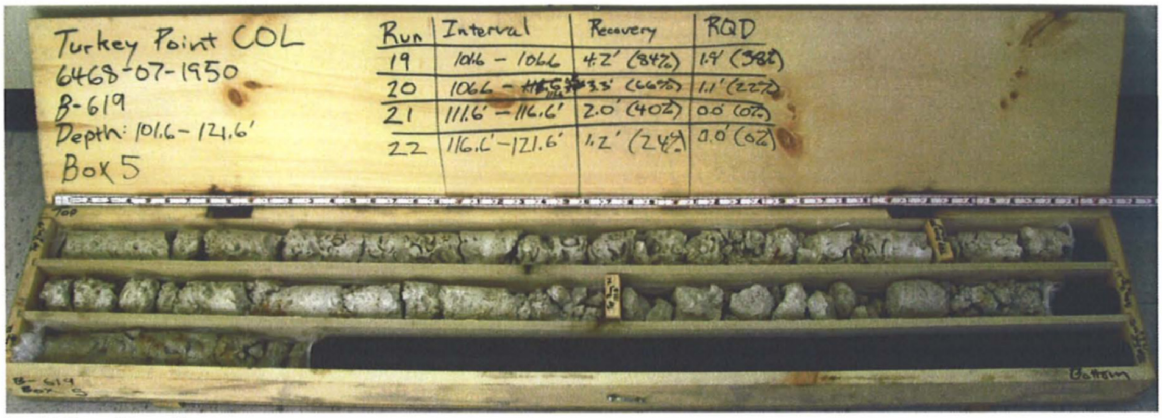
B-619 – Box 2



B-619 – Box 3



B-619 – Box 4


Turkey Point COL
6468-07-1950
B-619
Depth: 101.6 - 121.6'
Box 5
Run | Interval | Recovery | RQD
19 | 101.6 - 106.6 | 4.2' (84%) | 1.9' (38%)
20 | 106.6 - 111.6' | 3.3' (66%) | 1.1' (22%)
21 | 111.6' - 116.6' | 2.0' (40%) | 0.0' (0%)
22 | 116.6' - 121.6' | 1.2' (24%) | 0.0' (0%)

B-619 – Box 5