



BECHTEL PROJECT NO.: 25161		MACTEC PROJECT NO.: 6468-09-2473		COUNTY: Louisa, VA		GEOLOGIST: K. Lloyd								
SITE DESCRIPTION: North Anna 3 Project Supplement 2				DRILLER: D. White/O. Smith		FLUID LEVEL (ft)								
BORING NO.: M-14		DRILL METHOD: Mud Rotary		DRILL MACHINE: CME-55LC Track (RAL)		0 HR. ND								
GROUND ELEV.: 323.8 ft (NAVD88)		NORTHING: 3,909,452 US ft (NAD83)		EASTING: 11,686,111 US ft (NAD83)		24 HR. ND								
TOTAL DEPTH: 60.3 ft		SAMPLE METHODS: ASTM D 1586-08a; 2488-09a; 2113-08; 6032-08		ROD TYPE: AWJ		HAMMER (ID): 140-lb. Auto (MEC-02)								
DATE STARTED: 9/24/09		COMPLETED: 9/24/09		HOLE DIA.: 3"		CASING DEPTH: 8.6 ft								
CORE SIZE: NA		BITS USED: 2-7/8" Tri-Cone												
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION		
		0.5ft	0.5ft	0.5ft	0	20	40	60	80				100	
323.8					Ground Surface							323.8	0.0	
														No sampling from 0.0 to 8.9 feet due to soft dig utility clearance by Dominion Personnel
314.9	8.9	5	5	5								314.9	8.9	RESIDUAL SOIL: Silty SAND (SM), brownish yellow (10YR 6/8), loose, moist, fine to coarse grained sand, little mica, few quartz rock fragments, relict rock fabric
312.5	11.3	4	5	6						SS-1				11.3 ft: Medium dense
309.9	13.9	4	4	6						SS-2				13.9 ft: Light yellowish brown (10YR 6/4), loose
304.9	18.9	5	8	9						SS-3				
300.0	23.8	7	7	7						SS-4				18.9 ft: Brownish yellow (10YR 6/8), medium dense, few to little mica
295.0	28.8	7	11	13						SS-5				23.8 ft: Brownish yellow (10YR 6/6), trace to few mica
290.0	33.8	4	5	6						SS-6				28.8 ft: Brownish yellow (10YR 6/8)
285.0	38.8	6	8	7						SS-7				33.8 ft: Light brownish gray (10YR 6/2), fine grained sand
280.0	43.8	4	6	7						SS-8				38.8 ft: Light brownish gray (10YR 6/2) and grayish brown (10YR 5/2), little to some mica
275.0	48.8	5	6	9						SS-9				43.8 ft: Grayish brown (10YR 5/2)
270.0	53.8	3	6	18						SS-10				48.8 ft: Yellowish brown (10YR 5/6)
265.0	58.8	13	40	50						SS-11				53.8 ft: Brownish yellow (10YR 6/8), fine to coarse grained sand
										SS-12				58.8 ft: Grayish brown (10YR 5/2), very dense, some mica, little quartz rock fragments
														Boring terminated at 60.3 feet.
														Boring closed by tremie method with cement-bentonite grout.
														No 24 HR fluid level because boring grouted same day boring drilled.

NORTH ANNA 3 BORE, NORTH ANNA 3 PROJECT.GPJ, NORTH ANNA 3.GDT, 12/4/09



BECHTEL PROJECT NO.: 25161		MACTEC PROJECT NO.: 6468-09-2473		COUNTY: Louisa, VA		GEOLOGIST: B. Mabie							
SITE DESCRIPTION: North Anna 3 Project Supplement 2				DRILLER: D. Rhodes/K. Guy		FLUID LEVEL (ft)							
BORING NO.: M-15		DRILL METHOD: Mud Rotary		DRILL MACHINE: CME-45C Track (RAL)		0 HR.	13.4						
GROUND ELEV.: 311.3 ft (NAVD88)		NORTHING: 3,909,531 US ft (NAD83)		EASTING: 11,686,166 US ft (NAD83)		24 HR.	NA						
TOTAL DEPTH: 60.0 ft		SAMPLE METHODS: ASTM D 1586-08a; 2488-09a; 2113-08; 6032-08		ROD TYPE: AWJ		HAMMER (ID): 140-lb. Auto (MEC-12)							
DATE STARTED: 9/28/09		COMPLETED: 9/28/09		HOLE DIA.: 3"		CASING DEPTH: 9.0 ft							
CORE SIZE: NA		BITS USED: 2-7/8" Tri-Cone											
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100			
311.3					Ground Surface							311.3	0.0
302.8	8.5											302.8	8.5
300.7	10.6	2	2	3						SS-1		No sampling from 0.0 to 8.5 feet due to soft dig utility clearance by Dominion Personnel RESIDUAL SOIL: Silty SAND (SM), pale brown (10YR 6/3), loose, moist, fine to coarse grained sand, few mica, relict rock fabric 18.5 ft: Medium dense 23.5 ft: Very pale brown (10YR 7/4), trace mica 33.5 ft: Light yellowish brown (10YR 6/4) 38.5 ft: Yellowish brown (10YR 5/6) 43.5 ft: Very dense WEATHERED ROCK: Severely weathered BIOTITE QUARTZ GNEISS (Sampled as Well Graded SAND with Silt (SW-SM), yellowish brown (10YR 5/6), very dense, moist, fine to coarse grained sand, trace mica) RESIDUAL SOIL: Silty SAND (SM), yellowish brown (10YR 5/6), very dense, moist, fine to coarse grained sand, trace mica, relict rock fabric	
298.6	12.7	2	3	3						SS-2			
296.1	15.2	2	3	4						SS-3			
292.8	18.5	3	3	3						SS-4			
287.8	23.5	5	4	7						SS-5			
282.8	28.5	8	7	8						SS-6			
277.8	33.5	7	8	10						SS-7			
272.8	38.5	13	10	12						SS-8			
267.8	43.5	13	16	13						SS-9			
262.8	48.5	31	35	30						SS-10			
257.8	53.5	48	52/0.4							SS-11			
252.8	58.5	38	44	45						SS-12			
		23	24	36						SS-13			
												251.3	60.0

NORTH ANNA 3 BORE NORTH ANNA 3 PROJECT.GPJ NORTH ANNA 3.GDT 12/4/09



GEOTECHNICAL BORING LOG

Prepared By JJS Date 12/16/09

Checked By NAL Date 12/16/09


SHEET 1 OF 1

BECHTEL PROJECT NO.: 25161		MACTEC PROJECT NO.: 6468-09-2473		COUNTY: Louisa, VA		GEOLOGIST: C. Baldwin										
SITE DESCRIPTION: North Anna 3 Project Supplement 2				DRILLER: P. Pitts/J. Tucker		FLUID LEVEL (ft)										
BORING NO.: M-16		DRILL METHOD: Mud Rotary/Rock Core		DRILL MACHINE: CME-55 Track (RAL)		0 HR. 18.0										
GROUND ELEV.: 284.6 ft (NAVD88)		NORTHING: 3,909,990 US ft (NAD83)		EASTING: 11,685,802 US ft (NAD83)		24 HR. NA										
TOTAL DEPTH: 61.9 ft		SAMPLE METHODS: ASTM D 1586-08a; 2488-09a; 2113-08; 6032-08		ROD TYPE: AWJ		HAMMER (ID): 140-lb. Auto (MEC-21)										
DATE STARTED: 9/29/09		COMPLETED: 9/30/09		HOLE DIA.: 3"		CASING DEPTH: 8.9 ft										
CORE SIZE: NQ3		BITS USED: 2-7/8" Tri-Cone														
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION				
		0.5ft	0.5ft	0.5ft	0	20	40	60	80				100			
284.3					Ground Surface							284.3	0.0			
													283.8	0.5	ASPHALT (Roadway) to 0.5 ft. No sampling from 0.0 to 8.9 feet due to soft dig utility clearance by Dominion Personnel	
275.4	8.9	4	5	4							SS-1		275.4	8.9	RESIDUAL SOIL: Silty SAND (SM), light brown (7.5YR 6/4), loose, moist, fine to coarse grained sand, little mica, relict rock fabric	
272.7	11.6	3	3	5							SS-2					
270.3	14.0	4	3	3							SS-3					
265.3	19.0	4	4	7							SS-4				19.0 ft: Pinkish gray (7.5YR 6/2), medium dense, fine to medium grained sand	
260.3	24.0	5	5	7							SS-5				24.0 ft: Light brown (7.5YR 6/4)	
255.3	29.0	5	6	6							SS-6					
250.3	34.0	5	5	5							SS-7				34.0 ft: Yellowish red (5YR 5/8), loose, fine grained sand, some mica	
245.3	39.0	9	12	13							SS-8				39.0 ft: Light brown (7.5YR 6/4), medium dense, fine to medium grained sand, little mica	
240.3	44.0	12	19	21							SS-9				44.0 ft: Very pale brown (10YR 7/4), dense	
235.3	49.0	17	24	27							SS-10					
230.3	54.0	50/0.4									SS-11			232.3	52.0	WEATHERED ROCK: Severely weathered BIOTITE QUARTZ GNEISS (Sampled as Silty SAND (SM), reddish yellow (7.5YR 7/8), very dense, moist, fine to coarse grained sand, little mica)
225.3	59.0	50/0.1									SS-12			224.5	59.8	HARD ROCK: Brown and gray with trace orange staining, moderately weathered, moderately close fracturing, moderately hard, BIOTITE QUARTZ GNEISS Boring and coring terminated at 61.9 feet.
224.3	59.8	100/0.1									SS-13			222.4	61.9	
																Boring closed by tremie method with cement-bentonite grout. No 24 HR fluid level because boring grouted same day boring drilled.

NORTH ANNA 3 BORE NORTH ANNA 3 PROJECT.GPJ NORTH ANNA 3.CDT 12/3/09



BECHTEL PROJECT NO.: 25161		MACTEC PROJECT NO.: 6468-09-2473		COUNTY: Louisa, VA		GEOLOGIST: C. Baldwin	
SITE DESCRIPTION: North Anna 3 Project Supplement 2				DRILLER: P. Pitts/J. Tucker		FLUID LEVEL (ft)	
BORING NO.: M-16		DRILL METHOD: Mud Rotary/Rock Core		DRILL MACHINE: CME-55 Track (RAL)		0 HR. 18.0	
GROUND ELEV.: 284.6 ft (NAVD88)		NORTHING: 3,909,990 US ft (NAD83)		EASTING: 11,685,802 US ft (NAD83)		24 HR. NA	
TOTAL DEPTH: 61.9 ft		SAMPLE METHODS: ASTM D 1586-08a; 2488-09a; 2113-08; 6032-08				HAMMER (ID): 140-lb. Auto (MEC-21)	
DATE STARTED: 9/29/09		COMPLETED: 9/30/09		CASING DEPTH: 8.9 ft		CORE BARREL TYPE: Wireline NQ3 Triple Tube, series 6 bit	

ELEV. (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN		SAMP. NO.	STRATA		LOG	DESCRIPTION AND REMARKS
				REC. (ft) %	RQD (ft) %		REC. (ft) %	RQD (ft) %		
										Begin Coring @ 59.9 ft
224.4	59.9	2.0	3:00	(2.0)	(2.0)	RUN 1	(2.0)	(2.0)		HARD ROCK: Brown and gray with trace orange staining, moderately weathered, moderately close fracturing, moderately hard, BIOTITE QUARTZ GNEISS (continued) (1 joint at 90°, tight with trace clay) Boring and coring terminated at 61.9 feet. Boring closed by tremie method with cement-bentonite grout. No 24 HR fluid level because boring grouted same day boring drilled.
222.4	61.9		3:05	100%	100%		100%	100%		

NORTH ANNA 3 CORE NORTH ANNA 3 PROJECT.GPJ NORTH ANNA 3.GDT 12/3/09



M-16 - Box 1



ELEV. (ft)		DEPTH (ft)			BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION					
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100		MOI								
306.2					Ground Surface										306.2	0.0				
305.7															0.5	0.5	ASPHALT (Roadway) to 0.5 ft. No sampling from 0.0 to 9.3 feet due to soft dig utility clearance by Dominion Personnel			
296.9		9.3			2	3	3						SS-1		296.9	9.3	RESIDUAL SOIL: Lean CLAY with Sand (CL), strong brown (7.5YR 5/6), medium stiff, moist, fine to medium grained sand, relict rock fabric			
292.2		14.0			2	3	4						SS-2		294.2	12.0	RESIDUAL SOIL: Sandy SILT (ML), Yellowish brown (10YR 5/4), medium stiff, moist, fine grained sand, little mica, relict rock fabric			
287.1		19.1			9	13	16						SS-3		289.2	17.0	RESIDUAL SOIL: Silty SAND (SM), Brownish yellow (10YR 6/6), medium dense, moist, fine to coarse grained sand, little mica, relict rock fabric			
282.1		24.1			8	11	15						SS-4							
277.1		29.1			18	22	25						SS-5					29.1 ft: Dense		
272.1		34.1			15	18	38						SS-6					34.1 ft: Very pale brown (10YR 7/4), very dense		
267.1		39.1			7	10	15						SS-7					39.1 ft: Olive yellow (5Y 6/6), medium dense, fine to medium grained sand		
262.1		44.1			7	11	24						SS-8					44.1 ft: Dark gray (N 4/), dense		
257.1		49.1			15	28	20						SS-9					49.1 ft: Light olive brown (2.5YR 5/4)		
252.1		54.1			50/0.3								SS-10					254.2	52.0	WEATHERED ROCK: Severely weathered QUARTZ BIOTITE GNEISS (Sampled as Silty SAND (SM), reddish yellow (7.5YR 6/6) to light yellowish brown (2.5Y 6/3), very dense, moist, fine to medium grained sand, little mica, trace quartz rock fragments)
247.1		59.1			50/0.4								SS-11							
242.1		64.1			50/0.2								SS-12							
237.1		69.1			15	28	72/0.3						SS-13							
232.1		74.1																		

NORTH ANNA 3 BORE NORTH ANNA 3 PROJECT.GPJ NORTH ANNA 3.GDT 12/14/09



BECHTEL PROJECT NO.: 25161		MACTEC PROJECT NO.: 6468-09-2473		COUNTY: Louisa, VA		GEOLOGIST: C. Baldwin								
SITE DESCRIPTION: North Anna 3 Project Supplement 2				DRILLER: P. Pitts/J. Tucker		FLUID LEVEL (ft)								
BORING NO.: M-17		DRILL METHOD: Mud Rotary/Rock Core		DRILL MACHINE: CME-55 Trailer (RAL)		0 HR. NA								
GROUND ELEV.: 306.2 ft (NAVD88)		NORTHING: 3,909,775 US ft (NAD83)		EASTING: 11,686,214 US ft (NAD83)		24 HR. 22.0								
TOTAL DEPTH: 151.9 ft		SAMPLE METHODS: ASTM D 1586-08a; 2488-09a; 2113-08; 6032-08		ROD TYPE: AWJ		HAMMER (ID):140-lb. Auto (MEC-425)								
DATE STARTED: 9/21/09		COMPLETED: 9/24/09		HOLE DIA.: 3"		CASING DEPTH: 82.1 ft								
				CORE SIZE: NQ3		BITS USED: 2-7/8" Tri-Cone								
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION		
		0.5ft	0.5ft	0.5ft	0	20	40	60	80				100	
231.4					Continued from previous page									
227.1	79.1	38	62/0.3							100/0.8	SS-14	WEATHERED ROCK: Severely weathered QUARTZ BIOTITE GNEISS (Sampled as Silty SAND (SM), reddish yellow (7.5YR 6/6) to light yellowish brown (2.5Y 6/3), very dense, moist, fine to medium grained sand, little mica, trace quartz rock fragments) (continued)		
		50/0.2								50/0.2	SS-15			
222.1	84.1	50/0.2								50/0.2	SS-16			
												221.9	84.3	HARD ROCK: Dark gray with orange staining, moderately severe to moderately weathered, very close to close fracturing, medium hard to hard, QUARTZ BIOTITE GNEISS
												214.3	91.9	HARD ROCK: Light to dark gray with orange staining, moderately weathered, very close to moderately close fracturing, moderately hard, QUARTZ BIOTITE GNEISS
												199.3	106.9	HARD ROCK: Dark gray, moderately to very slightly weathered, very close to moderately close fracturing, hard, QUARTZ BIOTITE GNEISS
												169.3	136.9	HARD ROCK: Dark gray, moderately severe to slightly weathered, very close to close fracturing, medium hard to hard, QUARTZ BIOTITE GNEISS
												164.3	141.9	HARD ROCK: Dark gray, very slightly weathered, close to wide fracturing, hard, QUARTZ BIOTITE GNEISS

NORTH ANNA 3 BORE NORTH ANNA 3 PROJECT.GPJ NORTH ANNA 3.GDT 12/4/09



BECHTEL PROJECT NO.: 25161		MACTEC PROJECT NO.: 6468-09-2473			COUNTY: Louisa, VA		GEOLOGIST: C. Baldwin							
SITE DESCRIPTION: North Anna 3 Project Supplement 2					DRILLER: P. Pitts/J. Tucker			FLUID LEVEL (ft)						
BORING NO.: M-17		DRILL METHOD: Mud Rotary/Rock Core			DRILL MACHINE: CME-55 Trailer (RAL)			0 HR. NA						
GROUND ELEV.: 306.2 ft (NAVD88)		NORTHING: 3,909,775 US ft (NAD83)		EASTING: 11,686,214 US ft (NAD83)		24 HR. 22.0								
TOTAL DEPTH: 151.9 ft		SAMPLE METHODS: ASTM D 1586-08a; 2488-09a; 2113-08; 6032-08			ROD TYPE: AWJ		HAMMER (ID): 140-lb. Auto (MEC-425)							
DATE STARTED: 9/21/09		COMPLETED: 9/24/09		HOLE DIA.: 3"	CASING DEPTH: 82.1 ft	CORE SIZE: NQ3		BITS USED: 2-7/8" Tri-Cone						
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION		
		0.5ft	0.5ft	0.5ft	0	20	40	60	80				100	
156.6					Continued from previous page									
												154.3	151.9	Boring and coring terminated at 151.9 feet. Boring closed by tremie method with cement-bentonite grout.

NORTH ANNA 3 BORE NORTH ANNA 3 PROJECT.GPJ NORTH ANNA 3.GDT 12/4/09



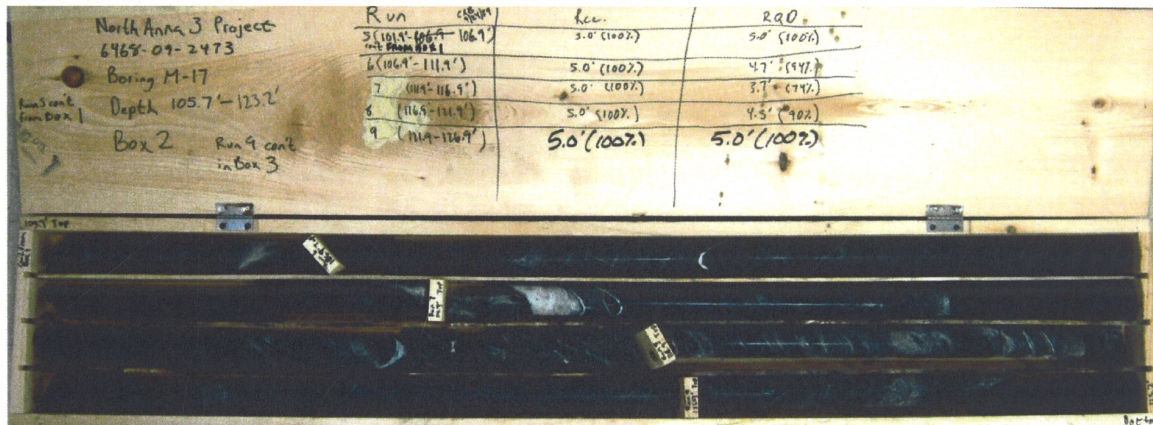
BECHTEL PROJECT NO.: 25161		MACTEC PROJECT NO.: 6468-09-2473		COUNTY: Louisa, VA		GEOLOGIST: C. Baldwin	
SITE DESCRIPTION: North Anna 3 Project Supplement 2				DRILLER: P. Pitts/J. Tucker		FLUID LEVEL (ft)	
BORING NO.: M-17		DRILL METHOD: Mud Rotary/Rock Core		DRILL MACHINE: CME-55 Trailer (RAL)		0 HR. NA	
GROUND ELEV.: 306.2 ft (NAVD88)		NORTHING: 3,909,775 US ft (NAD83)		EASTING: 11,686,214 US ft (NAD83)		24 HR. 22.0	
TOTAL DEPTH: 151.9 ft		SAMPLE METHODS: ASTM D 1586-08a; 2488-09a; 2113-08; 6032-08				HAMMER (ID): 140-lb. Auto (MEC-425)	
DATE STARTED: 9/21/09		COMPLETED: 9/24/09		CASING DEPTH: 82.1 ft		CORE BARREL TYPE: Wireline NQ3 Triple Tube, series 6 bit	

ELEV. (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN		SAMP. NO.	STRATA		LOG	DESCRIPTION AND REMARKS
				REC. (ft) %	RQD (ft) %		REC. (ft) %	RQD (ft) %		
										Begin Coring @ 84.3 ft
221.9	84.3	2.6	3:45/0.6 5:30 12:53	(2.6) 100%	(2.0) 77%	RUN 1	(5.6) 74%	(3.7) 49%		221.9 HARD ROCK: Dark gray with orange staining, moderately severe to moderately weathered, very close to close fracturing, medium hard to hard, QUARTZ BIOTITE GNEISS
219.3	86.9	5.0	5:00 3:57 6:20 10:20 5:11	(3.0) 60%	(1.7) 34%	RUN 2				(2 joints at 0°, open with clay; 2 joints at 50°, tight with trace clay) (2 joints at 0°, tight; 3 joints at 30°, tight)
214.3	91.9	5.0	5:45 3:42 3:30 3:13 5:15	(5.0) 100%	(3.1) 62%	RUN 3	(14.5) 97%	(11.4) 76%		214.3 HARD ROCK: Light to dark gray with orange staining, moderately weathered, very close to moderately close fracturing, moderately hard, QUARTZ BIOTITE GNEISS
209.3	96.9	5.0	4:09 3:20 3:43 2:40 3:22	(4.5) 90%	(3.3) 66%	RUN 4				(3 joints at 10°, tight to open; 7 joints at 30-40°, tight; 1 joint at 60°, tight) (3 joints at 30-40°, tight; 6 joints at 60-70°, tight to open)
204.3	101.9	5.0	3:20 3:05 3:29 2:55 3:40	(5.0) 100%	(5.0) 100%	RUN 5				(1 joint at 20°, tight; 2 joints at 40°, tight)
199.3	106.9	5.0	3:32 3:05 2:48 2:46 2:38	(5.0) 100%	(4.7) 94%	RUN 6	(30.0) 100%	(27.9) 93%		199.3 HARD ROCK: Dark gray, moderately to very slightly weathered, very close to moderately close fracturing, hard, QUARTZ BIOTITE GNEISS
194.3	111.9	5.0	3:30 3:23 3:50 3:35 4:00	(5.0) 100%	(3.7) 74%	RUN 7				(1 joint at 0°, tight; 1 joint at 20°, tight; 8 joints at 40-50°, tight)
189.3	116.9	5.0	3:55 3:15 3:57 3:05 2:30	(5.0) 100%	(4.5) 90%	RUN 8				(4 joints at 30°, tight)
184.3	121.9	5.0	3:12 3:57 2:40 2:54 3:12	(5.0) 100%	(5.0) 100%	RUN 9				(1 joint at 60°, tight)
179.3	126.9	5.0	3:00 3:04 2:55 2:52 2:31	(5.0) 100%	(5.0) 100%	RUN 10				(1 joint at 40°, tight)
174.3	131.9	5.0	2:40 3:00 3:08 3:17 2:56	(5.0) 100%	(5.0) 100%	RUN 11				(2 joints at 50°, tight)
169.3	136.9	5.0	3:18 2:32 1:00 2:39 3:33	(3.5) 70%	(2.0) 40%	RUN 12	(3.5) 70%	(2.0) 40%		169.3 HARD ROCK: Dark gray, moderately severe to slightly weathered, very close to close fracturing, medium hard to hard, QUARTZ BIOTITE GNEISS
164.3	141.9	5.0	3:42 3:41 3:20 3:00 2:05	(5.0) 100%	(5.0) 100%	RUN 13	(10.0) 100%	(10.0) 100%		164.3 HARD ROCK: Dark gray, very slightly weathered, close to wide fracturing, hard, QUARTZ BIOTITE GNEISS
159.3	146.9	5.0	2:57 3:20 2:53 2:50 2:24	(5.0) 100%	(5.0) 100%	RUN 14				(No Joints)
154.3	151.9								154.3 Boring and coring terminated at 151.9 feet. Boring closed by tremie method with cement-bentonite grout.	

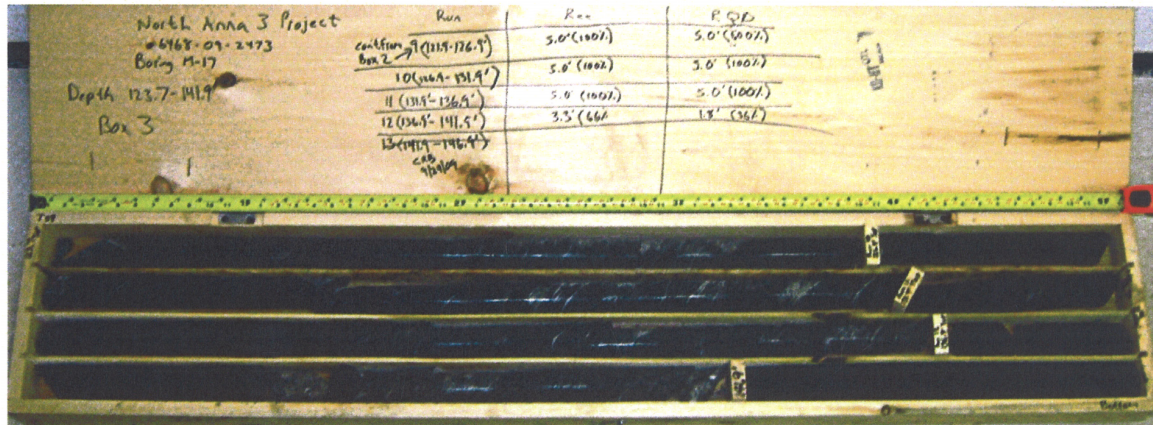
NORTH ANNA 3 CORE NORTH ANNA 3 PROJECT.GPJ NORTH ANNA 3.GDT 12/4/09



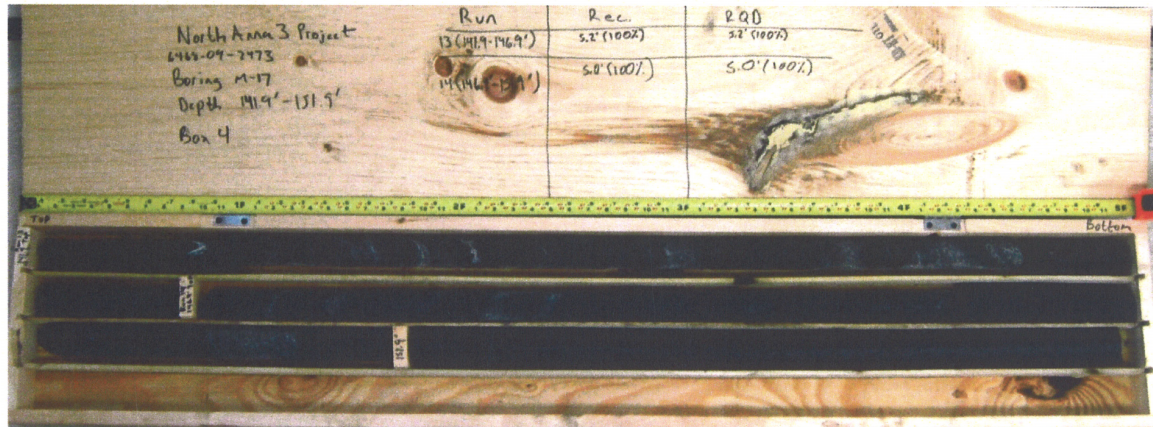
M-17 - Box 1



M-17 - Box 2



M-17 - Box 3



M-17 - Box 4



GEOTECHNICAL BORING LOG

Prepared By JJS Date 12/16/09

Checked By MAL Date 12/16/09

SHEET 1 OF 1

BECHTEL PROJECT NO.: 25161		MACTEC PROJECT NO.: 6468-09-2473		COUNTY: Louisa, VA		GEOLOGIST: B. Mabie									
SITE DESCRIPTION: North Anna 3 Project Supplement 2				DRILLER: D. Rhodes/K. Guy		FLUID LEVEL (ft)									
BORING NO.: M-18		DRILL METHOD: Mud Rotary		DRILL MACHINE: CME-45C Track (RAL)		0 HR. 16.0									
GROUND ELEV.: 304.2 ft (NAVD88)		NORTHING: 3,909,608 US ft (NAD83)		EASTING: 11,686,214 US ft (NAD83)		24 HR. NA									
TOTAL DEPTH: 60.4 ft		SAMPLE METHODS: ASTM D 1586-08a; 2488-09a; 2113-08; 6032-08		ROD TYPE: AWJ		HAMMER (ID): 140-lb. Auto (MEC-12)									
DATE STARTED: 9/29/09		COMPLETED: 9/29/09		HOLE DIA.: 3"		CASING DEPTH: 9.0 ft									
CORE SIZE: NA		BITS USED: 2-7/8" Tri-Cone													
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION			
		0.5ft	0.5ft	0.5ft	0	20	40	60	80				100		
304.2					Ground Surface							304.2	0.0		
														No sampling from 0.0 to 8.7 feet due to soft dig utility clearance by Dominion Personnel	
295.5	8.7														
293.5	10.7	2	2	2							SS-1		295.5	8.7	RESIDUAL SOIL: SILT (ML), strong brown (7.5YR 4/6), soft, moist, few mica, dark brown and black staining, relict rock fabric
291.4	12.8	2	1	3							SS-2				
288.9	15.3	2	2	2							SS-3				
285.7	18.5	1	2	3							SS-4		15.3 ft: Medium stiff		
280.7	23.5	2	2	3							SS-5		18.5 ft: Pale Yellow (2.5Y 7/4)		
275.7	28.5	2	3	4							SS-6		283.2	21.0	RESIDUAL SOIL: Elastic SILT (MH), yellow (2.5Y 7/6), medium stiff, moist, trace mica, orange and brown staining, relict rock fabric
270.7	33.5	2	3	4							SS-7				
265.7	38.5	2	3	3							SS-8		28.5 ft: Olive yellow (2.5Y 6/6)		
260.7	43.5	2	1	2							SS-9		33.5 ft: Light yellowish brown (2.5Y 6/4), little mica		
255.7	48.5	2	3	4							SS-10		38.5 ft: Soft		
250.7	53.5	3	6	6							SS-11		262.2	42.0	RESIDUAL SOIL: Silty SAND (SM), strong brown (7.5YR 5/6), medium dense, moist, fine to coarse grained sand, trace mica, relict rock fabric
245.7	58.5	5	3	4							SS-12				
244.0	60.2	78	22/0.1								SS-13		252.2	52.0	RESIDUAL SOIL: Sandy SILT (ML), strong brown (7.5YR 5/6), stiff, moist, trace mica, relict rock fabric
		50/0.2									SS-14		247.2	57.0	WEATHERED ROCK: Severely weathered BIOTITE QUARTZ GNEISS (Sampled as Silty SAND (SM), brownish yellow (10YR 6/4), very dense, moist, fine to coarse grained sand, trace mica)
													243.8	60.4	Boring terminated at 60.4 feet.

NORTH ANNA 3 BORE NORTH ANNA 3 PROJECT.GPJ NORTH ANNA 3.GDT 12/4/09