



MACTEC PROJECT NO.: 6468-06-1472				COUNTY Louisa, VA		GEOLOGIST S. Nicely											
SITE DESCRIPTION NORTH ANNA COL					GROUND WATER (ft)												
BORING NO. B-917		DRILL METHOD: Mud Rotary/Core		SAMPLE METHODS: SPT/CORE		0 HR. 8.3											
COLLAR ELEV. 274.9 ft (NAVD88)		NORTHING 3,910,161 US ft (NAD83)		EASTING 11,686,029 US ft (NAD83)		24 HR. 8.7											
TOTAL DEPTH 150.8 ft		DRILL MACHINE CME 55 Truck		DRILLER: H. Meyerson		HAMMER TYPE 140 lbs Auto											
DATE STARTED 9/25/06		COMPLETED 9/29/06		CORE BARREL TYPE: HQ 3 triple tube-wireline													
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION				
		0.5ft	0.5ft	0.5ft	0	20	40	60	80					100			
274.9					Ground Surface								274.9	0.0			
273.5	1.4																
271.1	3.8	3	1	1	●												
268.6	6.3	25	8	7	●												
266.2	8.7	2	3	2	●												
263.3	11.6	2	2	3	●												
261.4	13.5	2	3	4	●												
		2	4	4	●												
256.6	18.3				●												
		4	4	3	●												
251.3	23.6	3	4	4	●												
246.3	28.6	6	8	9	●												
241.4	33.5	8	9	9	●												
236.4	38.5	9	13	14	●												
231.4	43.5	10	12	12	●												
226.4	48.5	9	16	23	●												
221.4	53.5	18	28	31	●												
216.4	58.5	43	50/0.3		●												
211.4	63.5	39	50/0.2		●												
206.4	68.5	50/0.4			●												
201.4	73.5	50/0.2			●												
					●												

NORTH ANNA COL 1/19/07

274.9
Sandy SILT (ML), yellowish brown (10YR 4/6), moist, very soft, to Silty, medium to coarse SAND (SM), dark gray (10YR 4/1) and yellowish brown (10YR 4/6), moist, medium dense (FILL)
270.5
Silty, fine to coarse SAND (SM), brownish yellow (10YR 6/8) to yellowish brown (10YR 5/8 and 5/4), moist to wet, medium dense to loose, trace clay (Residual Soil)
248.9
Silty, fine to coarse SAND (SM), Brownish yellow (10YR 6/6), olive yellow (2.5Y 6/6), and light olive brown (2.5Y 5/4), moist, medium dense to very dense (Residual Soil)
217.9
Weathered Rock: Light olive brown (2.5Y 5/4), brown (10YR 4/3), olive yellow (2.5Y 6/6), light yellowish brown (2.5Y 6/4), and brownish yellow (10YR 6/8), moist, very dense, weathered, BIOTITE QUARTZ GNEISS
57.0



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COLLAR ELEV. 274.9 ft (NAVD88)		NORTHING 3,910,161		US ft (NAD83)		EASTING 11,686,029		US ft (NAD83)		24 HR. 8.7		
TOTAL DEPTH 150.8 ft		DRILL MACHINE CME 55 Truck				DRILLER: H. Meyerson				HAMMER TYPE 140 lbs Auto		
DATE STARTED 9/25/06			COMPLETED 9/29/06			CORE BARREL TYPE: HQ 3 triple tube-wireline						
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			
200.0					Continued from previous page							
196.4	78.5											Weathered Rock: Light olive brown (2.5Y 5/4), brown (10YR 4/3), olive yellow (2.5Y 6/6), light yellowish brown (2.5Y 6/4), and brownish yellow (10YR 6/8), moist, very dense, weathered, BIOTITE QUARTZ GNEISS (continued)
191.4	83.5	50/0.2								917-19		
187.4	87.5	50/0.3								917-20		
187.4	87.5	50/0.3								917-21		187.1 87.8 Hard Rock: Brownish gray, moderately weathered, very close to close fracturing, hard to very hard, BIOTITE-QUARTZ GNEISS
												178.8 96.1 Hard Rock: Light gray, fresh, very close to very wide fracturing, very hard, BIOTITE-QUARTZ GNEISS

NORTH ANNA COL CORE NORTH ANNA COL DATA REPORT REV0.GPJ NORTH ANNA COL GDT 1/19/07



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TOTAL DEPTH 150.8 ft		DRILL MACHINE CME 55 Truck				DRILLER: H. Meyerson				HAMMER TYPE 140 lbs Auto					
DATE STARTED 9/25/06				COMPLETED 9/29/06				CORE BARREL TYPE: HQ 3 triple tube-wireline							
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION		
		0.5ft	0.5ft	0.5ft	0	20	40	60	80					100	
125.2														Continued from previous page	
														124.1	Boring and coring terminated at 150.8 ft in Hard Rock: Very hard, BIOTITE-QUARTZ GNEISS
														150.8	

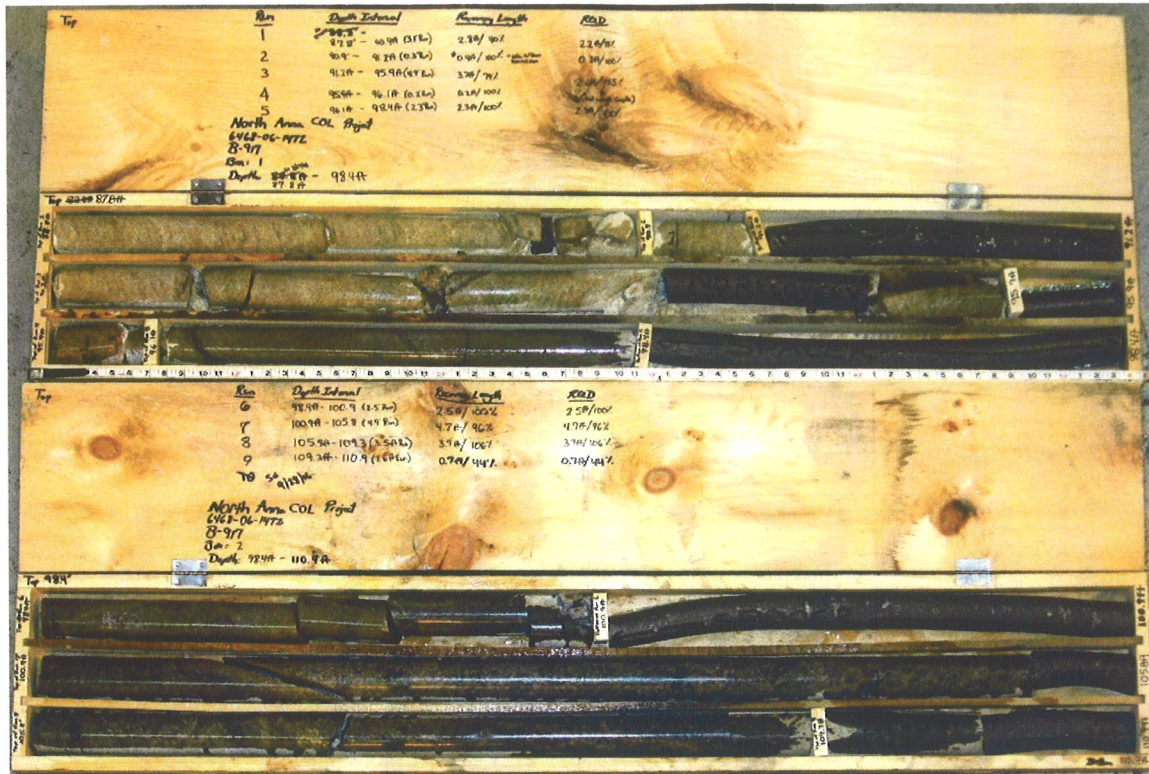
NORTH ANNA COL BORE NORTH ANNA COL DATA REPORT REV0.GPJ NORTH ANNA COL GDT 1/19/07



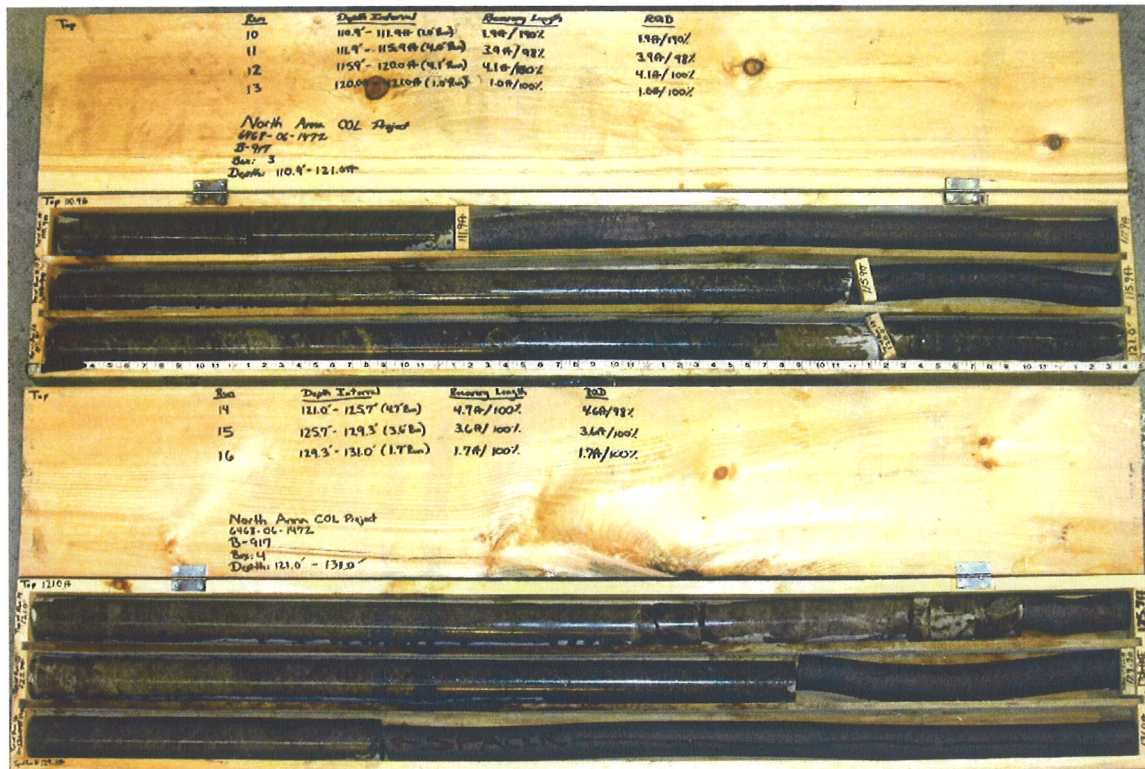
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TOTAL DEPTH 150.8 ft		DRILL MACHINE CME 55 Truck		DRILLER: H. Meyerson		HAMMER TYPE 140 lbs Auto	
DATE STARTED 9/25/06			COMPLETED 9/29/06		CORE BARREL TYPE: HQ 3 triple tube-wireline		
CORE SIZE HQ3			TOTAL RUN 63.0 ft				

ELEV. (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN		SAMP. NO.	STRATA		LOG	DESCRIPTION AND REMARKS
				REC. (%)	RQD (%)		REC. (%)	RQD (%)		
										Begin Coring @ 87.8 ft
187.1	87.8	3.1	2:53 2:46	(2.8) 90%	(2.2) 71%	1				187.1 Hard Rock: Brownish gray, moderately weathered, very close to close fracturing, hard to very hard, BIOTITE-QUARTZ GNEISS (1 joint at 20° with Fe and Mn stain; 1 joint at 45° with Fe stain) (1 joint at 90°) -Highly fractured zones from 91.3-91.9 ft, 93.0-93.2 ft, and 94.3-95.3 ft
184.0	90.9		2:56							
183.7	91.2	0.3	2:50/0.1	(0.4)	(0.3)	2				
		4.7	0:12/0.3	133%	100%	3				
			2:15 1:43 0:57	(3.7) 79%	(2.6) 55%					
179.0	95.9		2:46/1.7							
178.8	96.1	0.2	0:29/0.2	(0.2)	(NA)	4				178.8 Hard Rock: Light gray, fresh, very close to very wide fracturing, very hard, BIOTITE-QUARTZ GNEISS
176.5	98.4	2.3	4:55	100%	(2.3)	5				-No Joints
		2.5	11:05	(2.3)	100%	6				-No Joints
174.0	100.9		15:23/0.3	100%	(2.5)					(1 joint at 65°)
		4.9	0:37/0.5	100%	(2.5)	7				
			8:03 10:48	100%	(4.7)					
			5:15 5:43 5:22 6:49	(4.7) 96%						
169.1	105.8		8:53/0.9	(3.7)	(3.7)	8				-No Joints
		3.5	7:03	106%	106%					
165.6	109.3		7:46							
		1.6	13:35							
164.0	110.9		16:31/0.5	(0.7)	(0.7)	9				-No Joints
163.0	111.9	1.0	13:13/0.6	44%	44%	10				-No Joints
		4.0	17:48	(1.9)	(1.9)	11				-No Joints
			3:49	190%	190%					
			3:21 4:34 4:57	(3.9) 98%	(3.9) 98%					
159.0	115.9		5:24	(4.1)	(4.1)	12				(1 joint at 25° with Fe stain)
		4.1	5:14 6:04 7:44	100%	100%					
154.9	120.0		11:23/1.1							
153.9	121.0	1.0	4:26	(1.0)	(1.0)	13				-No Joints
		4.7	4:47	100%	100%	14				(2 joints at 10-15°; Quartz vein from 123.9-125.7 ft)
			4:25 4:43 8:23	(4.7) 100%	(4.6) 98%					
149.2	125.7		14:51/0.7	(3.6)	(3.6)	15				-No Joints; Quartz vein cont. from 125.7-126.0 ft
		3.6	7:37 8:44 11:05	100%	100%					
145.6	129.3		11:39/0.6	(1.7)	(1.7)	16				-No Joints
143.9	131.0	1.7	1:53/0.4	100%	100%	17				(2 joints at 70-75° with Fe staining; 5 joints at 20-30° with Fe stain, slightly weathered)
		5.0	4:37	100%	100%					
			1:05/0.3	(5.0)	(4.5)					
			5:54 5:19 4:31 4:47	100%	90%					
138.9	136.0		6:06	(2.7)	(2.7)	18				-No Joints
		2.8	6:17 8:41	96%	96%					
136.1	138.8		12:58/0.8	(2.1)	(2.1)	19				-No Joints
134.1	140.8	2.0	0:25/0.2	105%	105%					-No Joints
		5.1	8:56	(5.1)	(5.1)	20				
			11:37/0.8	100%	100%					
			4:19 4:22 4:36 5:23 8:46	(4.9) 100%	(4.9) 100%					
129.0	145.9		1:29/0.1			21				-No Joints
		4.9	5:07 4:48 7:06 6:21	100%	100%					
124.1	150.8		9:07/0.9							124.1 Coring terminated at 150.8 ft in Hard Rock: Very hard, BIOTITE-QUARTZ GNEISS

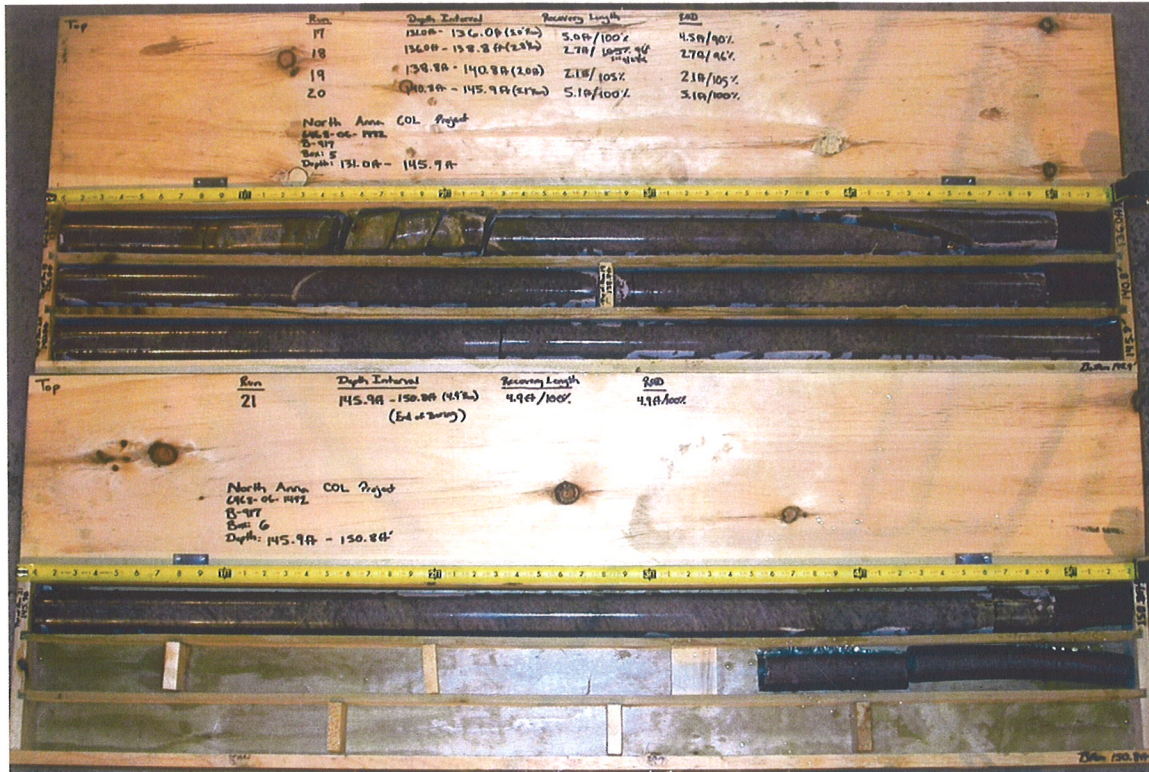
NORTH ANNA COL CORE NORTH ANNA COL DATA REPORT REV0.GPJ NORTH ANNA COL.GDT 1/19/07



B-917 - Box 1
B-917 - Box 2



B-917 - Box 3
B-917 - Box 4



B-917 - Box 5
B-917 - Box 6