



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.	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									917-1				
271.1	3.8	3	1	1						917-2		270.5	4.4	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)
268.6	6.3	25	8	7						917-3				
266.2	8.7	2	3	2						917-4				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)
263.3	11.6	2	2	3						917-5				
261.4	13.5	2	3	4						917-6				
		2	4	4										
256.6	18.3									917-7				
		4	4	3										
251.3	23.6	3	4	4						917-8				
		3	4	4										
246.3	28.6	6	8	9						917-9		248.9	26.0	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)
		6	8	9										
241.4	33.5	8	9	9						917-10				
		8	9	9										
236.4	38.5	9	13	14						917-11				
		9	13	14										
231.4	43.5	10	12	12						917-12				
		10	12	12										
226.4	48.5	9	16	23						917-13				
		9	16	23										
221.4	53.5	18	28	31						917-14				
		18	28	31										
216.4	58.5	43	50/0.3							917-15		217.9	57.0	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
		43	50/0.3											
211.4	63.5	39	50/0.2							917-16				
		39	50/0.2											
206.4	68.5	50/0.4								917-17				
		50/0.4												
201.4	73.5	50/0.2								917-18				
		50/0.2												

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



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.	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
		50/0.3										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



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	
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	

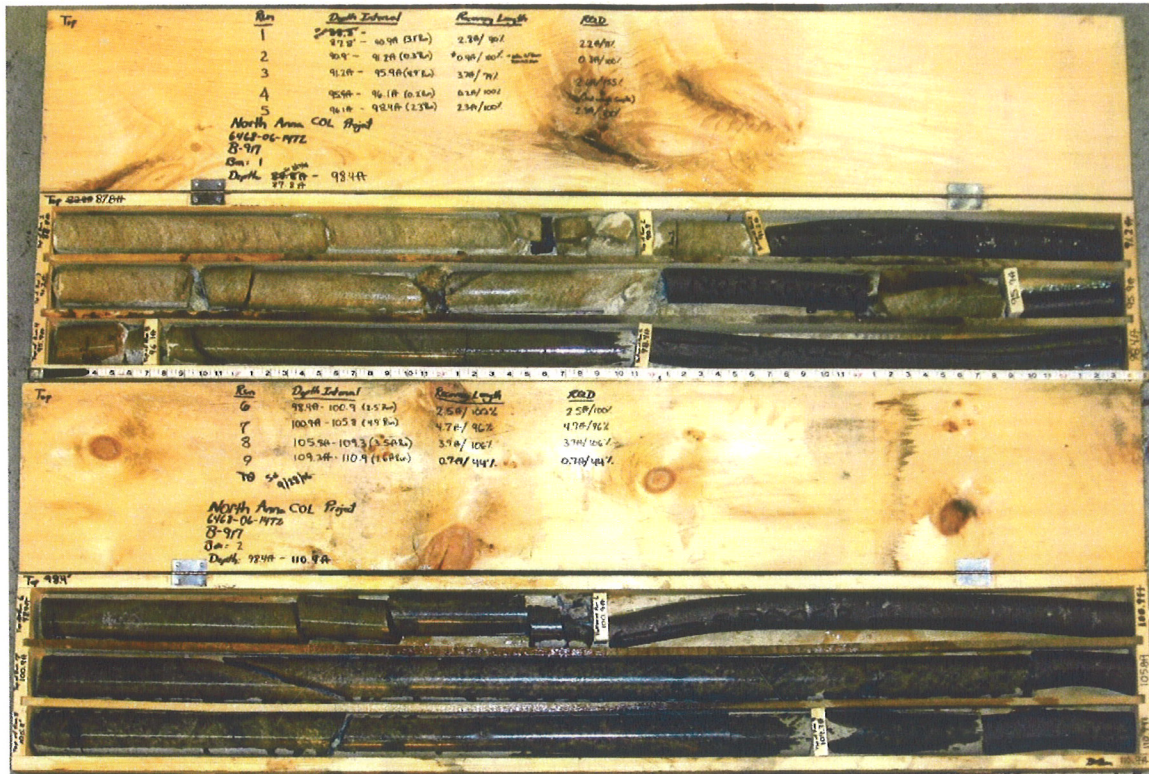
NORTH ANNA COL BORE NORTH ANNA COL DATA REPORT REV0.GPJ NORTH ANNA COL GDT 1/19/07



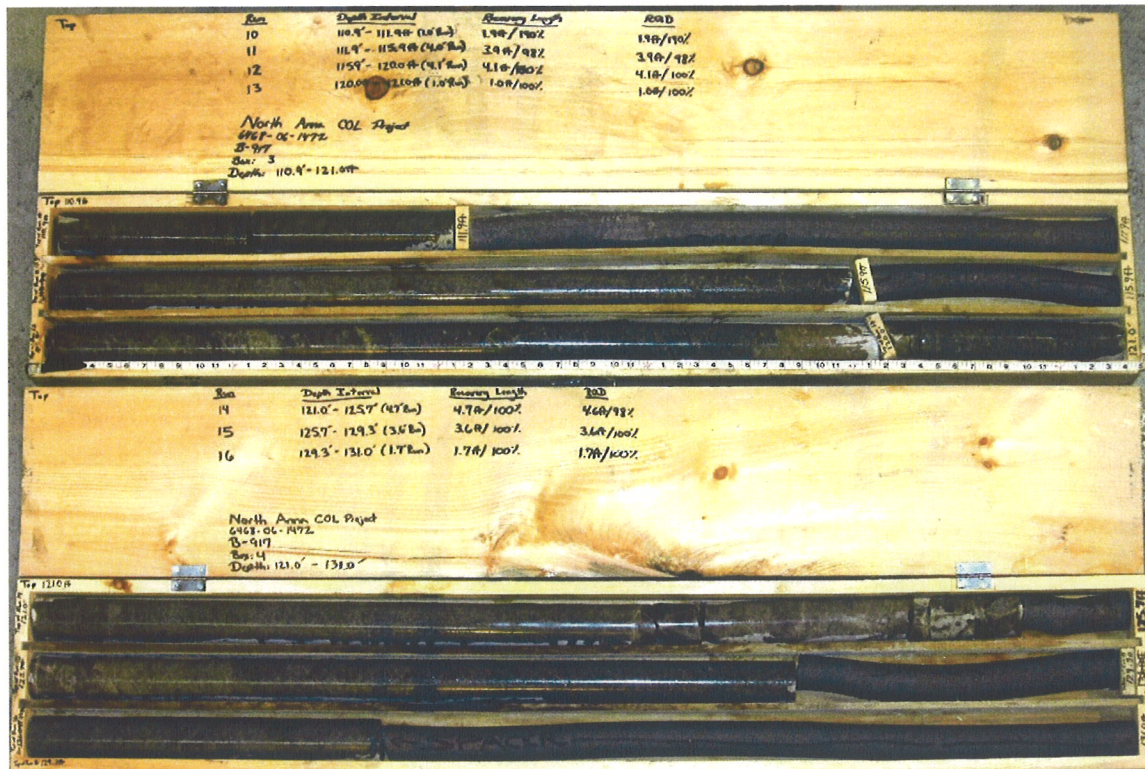
MACTEC PROJECT NO.: 6468-06-1472				COUNTY Louisa, VA		GEOLOGIST S. Nicely	
SITE DESCRIPTION NORTH ANNA COL							GROUND WATER (ft)
BORING NO. B-917		DRILL METHOD: Mud Rotary/Core		SAMPLE METHODS: SPT/CORE			0 HR. 8.3
COLLAR ELEV. 274.9 ft (NAVD88)		NORTHING 3,910,161 US ft (NAD83)		EASTING 11,686,029 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		
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
178.8	96.1	0.2	0:29/0.2	(0.2)	(NA)	4				
		2.3	4:55	100%	(2.3)	5				
176.5	98.4		11:05	(2.3)	100%	6				
		2.5	15:23/0.3	100%	(2.5)					
174.0	100.9		0:37/0.5	(2.5)	100%	7				
		4.9	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				
		3.5	7:03 7:46	106%	106%					
165.6	109.3		13:35							
164.0	110.9	1.6	16:31/0.5	(0.7)	(0.7)	9				
			13:13/0.6	44%	44%					
163.0	111.9	1.0	17:48	(1.9)	(1.9)	10				
		4.0	3:49	190%	190%	11				
			3:21 4:34 4:57	(3.9) 98%	(3.9) 98%					
159.0	115.9		5:24	(4.1)	(4.1)	12				
		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				
		4.7	4:47	100%	100%	14				
			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				
		3.6	7:37 8:44 11:05	100%	100%					
145.6	129.3		11:39/0.6							
143.9	131.0	1.7	1:53/0.4	(1.7)	(1.7)	16				
			4:37	100%	100%					
		5.0	1:05/0.3	(5.0)	(4.5)	17				
			5:54 5:19 4:31 4:47	100%	90%					
138.9	136.0		6:06	(2.7)	(2.7)	18				
		2.8	6:17 8:41	96%	96%					
136.1	138.8		12:58/0.8							
		2.0	0:25/0.2	(2.1)	(2.1)	19				
			8:56	105%	105%					
		5.1	11:37/0.8	(5.1)	(5.1)	20				
			4:19 4:22 4:36 5:23 8:46	100%	100%					
129.0	145.9		1:29/0.1	(4.9)	(4.9)	21				
		4.9	5:07 4:48 7:06 6:21	100%	100%					
124.1	150.8		9:07/0.9							124.1
										150.8
										Coring terminated at 150.8 ft in Hard Rock: Very hard, BIOTITE-QUARTZ GNEISS

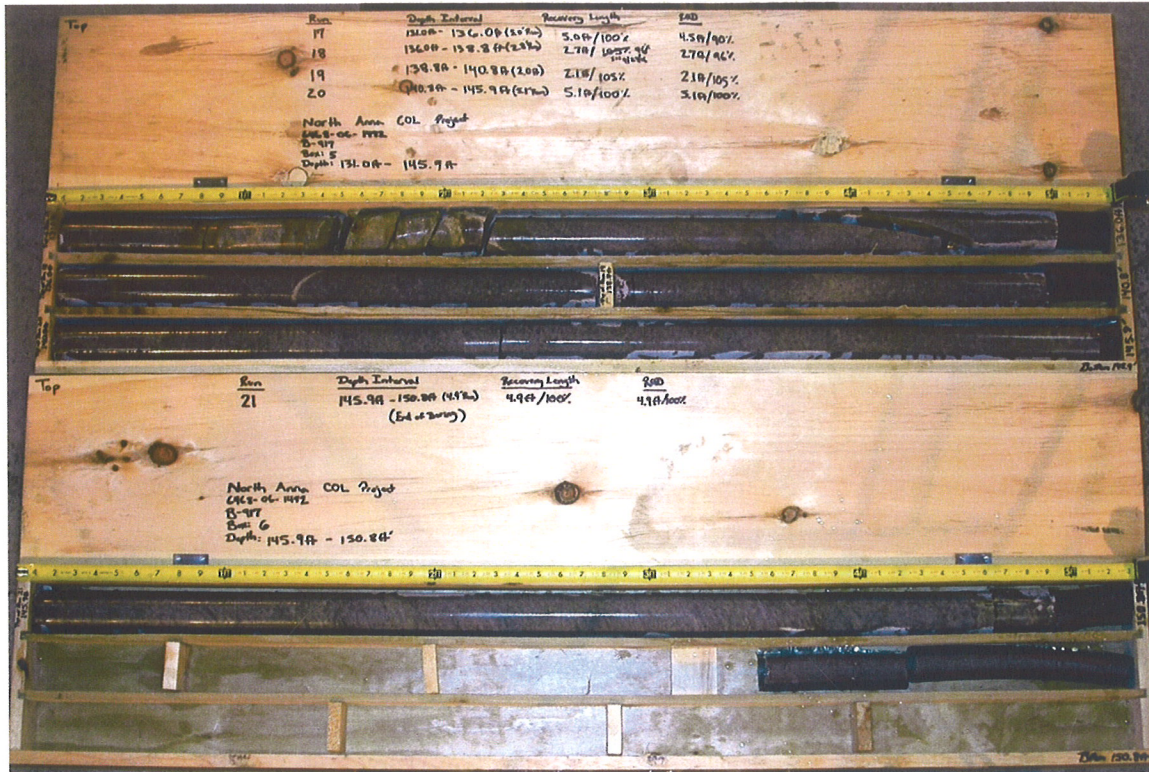
NORTH ANNA COL CORE NORTH ANNA COL DATA REPORT REV0.GPJ NORTH ANNA COL.GDT 1/19/07



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



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



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