



MACTEC PROJECT NO.: 6468-06-1472				COUNTY Louisa, VA				GEOLOGIST J. Howard				
SITE DESCRIPTION NORTH ANNA COL										GROUND WATER (ft)		
BORING NO. B-906		DRILL METHOD: Mud Rotary/Core				SAMPLE METHODS: SPT/CORE				0 HR. 6.0		
COLLAR ELEV. 311.7 ft (NAVD88)		NORTHING 3,909,670		US ft (NAD83)		EASTING 11,685,795		US ft (NAD83)		24 HR. 28.8		
TOTAL DEPTH 150.5 ft		DRILL MACHINE CME 550 ATV				DRILLER: G. Akins				HAMMER TYPE 140 lbs Auto		
DATE STARTED 9/13/06			COMPLETED 9/19/06			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			
236.9					Continued from previous page							
												234.4 Weathered Rock: Tan gray, severely weathered Quartz GNEISS (partial recovery) 77.3 (continued) Hard Rock: Gray, moderately weathered, close fracturing, moderately hard, QUARTZ GNEISS Weathered Rock: Brown gray, severely weathered, QUARTZ GNEISS (partial recovery)
												227.0 84.7
												225.7 86.0
												222.9 88.8
												Hard Rock: Gray, gray brown, blue gray, and pink, moderately to very slightly weathered, close to moderately close fracturing, medium hard to hard, BIOTITE GNEISS
												181.7 130.0
												178.5 133.2
												Weathered Rock: Severely weathered, BIOTITE GNEISS (partial recovery) Hard Rock: Blue gray, slightly weathered to fresh, close to moderately close fracturing, hard to very hard, BIOTITE GNEISS

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



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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	
162.1					Continued from previous page										
													161.2	150.5	Boring and coring terminated at 150.5 ft in Hard Rock: Very hard, BIOTITE 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 150.5 ft		DRILL MACHINE CME 550 ATV				DRILLER: G. Akins				HAMMER TYPE 140 lbs Auto	
DATE STARTED 9/13/06				COMPLETED 9/19/06				CORE BARREL TYPE: HQ 3 triple tube-wireline			
CORE SIZE HQ3				TOTAL RUN 111.5 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 @ 39.0 ft											
272.7	39.0	1.5	4:30/1.5	(1.0)	(0.0)	1				272.7	Hard Rock: Tan gray, gray brown, and gray orange, moderately to slightly weathered, very close to moderately close fracturing, moderately hard to hard, BIOTITE GNEISS
271.2	40.5	5.0	1:30	67%	0%	2					-Weathered zones (2 joints at 70° with weathering)
			1:30	60%	44%						
266.2	45.5	5.0	2:15								
			2:00								(2 joints at 60°, 4 joints at 80-85° with weathering)
261.2	50.5	5.0	1:45	(4.3)	(2.6)	3					
			2:00	86%	52%						
			2:15								
256.2	55.5	5.0	2:00								
			2:00	(4.7)	(3.6)	4					(4 joints at 50-60°, 4 joints at 70-80°)
			2:00	94%	72%						
			2:00								
251.2	60.5	5.0	1:45	(4.5)	(2.5)	5					(2 joints at 60-70°, 3 joints at 50°)
			2:00	90%	50%						
			2:15								
246.2	65.5	5.0	2:00								
			2:00	(5.0)	(4.8)	6					(8 joints at 30-40°)
			3:15	100%	96%						
			2:45								
242.9	68.8	3.3	3:15	(3.3)	(2.0)	7					
			4:15	100%	61%						
			3:45								
236.8	74.9	6.1	2:15/0.3	(4.6)	(2.0)	8				242.9	Hard Rock: Tan gray, moderately to slightly weathered, very close to close fracturing, moderately hard, QUARTZ GNEISS
			4:15/0.8	75%	33%						
			5:00								
			4:45								
			3:00								
			2:45								
			8:45/1.3								
231.0	80.7	5.8	3:45	(3.2)	(1.5)	9				236.7	Weathered Rock: Tan gray, severely weathered Quartz GNEISS (partial recovery)
			3:00	55%	26%						
			3:00								
			2:00								
			4:15/1.8								
226.0	85.7	5.0	2:45	(2.0)	(0.0)	10				236.8	Hard Rock: Gray, moderately weathered, close fracturing, moderately hard, QUARTZ GNEISS
			3:00	40%	0%						
			6:15								
			4:30								
			2:45								
221.0	90.7	4.9	2:45	(2.3)	(1.2)	11				234.4	Weathered Rock: Brown gray, severely weathered, QUARTZ GNEISS (partial recovery)
			3:15	46%	24%						
			3:00								
			4:15								
			8:00								
216.1	95.6	4.4	5:00	(4.3)	(3.8)	12				227.0	Hard Rock: Brown gray, moderately severe to moderately weathered, very close to close fracturing, medium hard, QUARTZ GNEISS
			3:30	88%	78%						
			3:30								
			3:15								
			4:11/0.9								
211.7	100.0	5.5	1:30/0.4	(5.5)	(4.7)	14				225.7	Hard Rock: Gray, gray brown, blue gray, and pink, moderately to very slightly weathered, close to moderately close fracturing, medium hard to hard, BIOTITE GNEISS
			2:30	100%	85%						
			3:30								
			3:15								
			3:00								
			4:00/1.5								
206.2	105.5	5.0	2:30	(5.0)	(4.2)	15				222.9	Weathered Rock: Brown gray, severely weathered, QUARTZ GNEISS (partial recovery)
			2:15	100%	84%						
			2:15								
			3:00								
			2:30								
201.2	110.5	5.0	3:00	(4.9)	(4.1)	16					Hard Rock: Gray, gray brown, blue gray, and pink, moderately to very slightly weathered, close to moderately close fracturing, medium hard to hard, BIOTITE GNEISS
			3:15	98%	82%						(5 joints at 30-40°)
			2:45								(2 joints at 80°, 1 joint at 20°)
											(4 joints at 30-40°, 2 joints at 50°)
											(3 joints at 30-40°, 1 joint at 85°; trace epidote)

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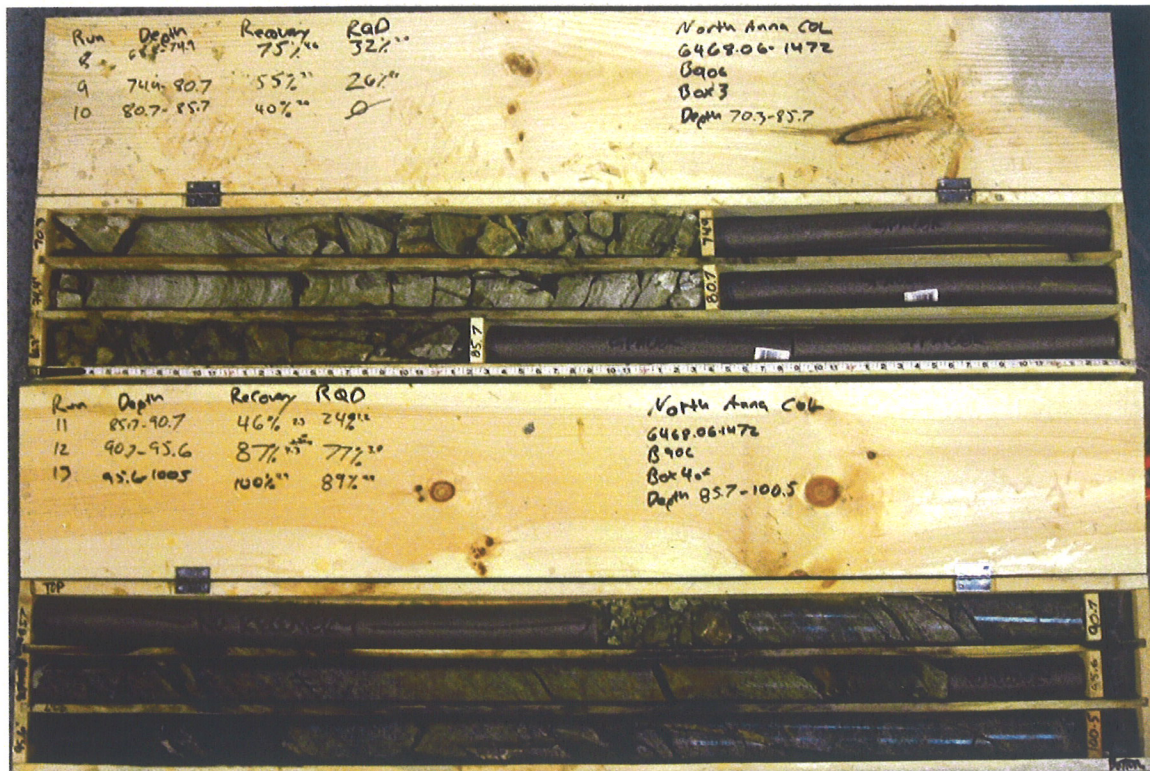
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BORING NO. B-906		DRILL METHOD: Mud Rotary/Core				SAMPLE METHODS: SPT/CORE				0 HR. 6.0	
COLLAR ELEV. 311.7 ft (NAVD88)		NORTHING 3,909,670		US ft (NAD83)		EASTING 11,685,795		US ft (NAD83)		24 HR. 28.8	
TOTAL DEPTH 150.5 ft		DRILL MACHINE CME 550 ATV				DRILLER: G. Akins				HAMMER TYPE 140 lbs Auto	
DATE STARTED 9/13/06				COMPLETED 9/19/06				CORE BARREL TYPE: HQ 3 triple tube-wireline			
CORE SIZE HQ3				TOTAL RUN 111.5 ft							
ELEV. (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN		SAMP. NO.	STRATA		L O G	DESCRIPTION AND REMARKS	
				REC. (ft) %	ROD (ft) %		REC. (ft) %	ROD (ft) %			
Continued from previous page											
196.2	115.5	5.0	3:00 4:00	(5.0) 100%	(4.5) 90%	17				Hard Rock: Gray, gray brown, blue gray, and pink, moderately to very slightly weathered, close to moderately close fracturing, medium hard to hard, BIOTITE GNEISS (<i>continued</i>) (7 joints at 40°; trace epidote, quartz veins)	
191.2	120.5	5.0	2:30 3:15 3:30 5:00	(5.0) 100%	(4.1) 82%	18				(7 joints at 30-40°)	
186.2	125.5	5.0	3:00 3:45 4:30 4:00 6:30	(5.0) 100%	(4.1) 82%	18				(7 joints at 30-40°)	
181.2	130.5	5.0	3:30 2:30 3:30 3:30 3:30	(4.5) 90%	(3.6) 72%	19				(4 joints at 50°)	
									181.7	130.0	
		5.0	3:00 3:45 6:45 5:00 6:30	(4.6) 92%	(2.9) 58%	20			178.5	133.2	
176.2	135.5	5.0	10:15 9:30 8:45 7:00 10:30	(5.0) 100%	(5.0) 100%	21				Hard Rock: Blue gray, slightly weathered to fresh, close to moderately close fracturing, hard to very hard, BIOTITE GNEISS (4 joints at 60°)	
171.2	140.5	4.9	2:45 3:15 4:30 5:30 7:15	(4.9) 100%	(4.5) 92%	22				(5 joints at 60°, 1 joint at 40°; quartz+feldspar veins)	
166.3	145.4	5.1	4:45 5:30 5:45 5:15 7:45/1.1	(5.1) 100%	(5.1) 100%	23				(4 joints at 40°, 1 joint at 20°)	
161.2	150.5								161.2	150.5	
Coring terminated at 150.5 ft in Hard Rock: Very hard, BIOTITE GNEISS											

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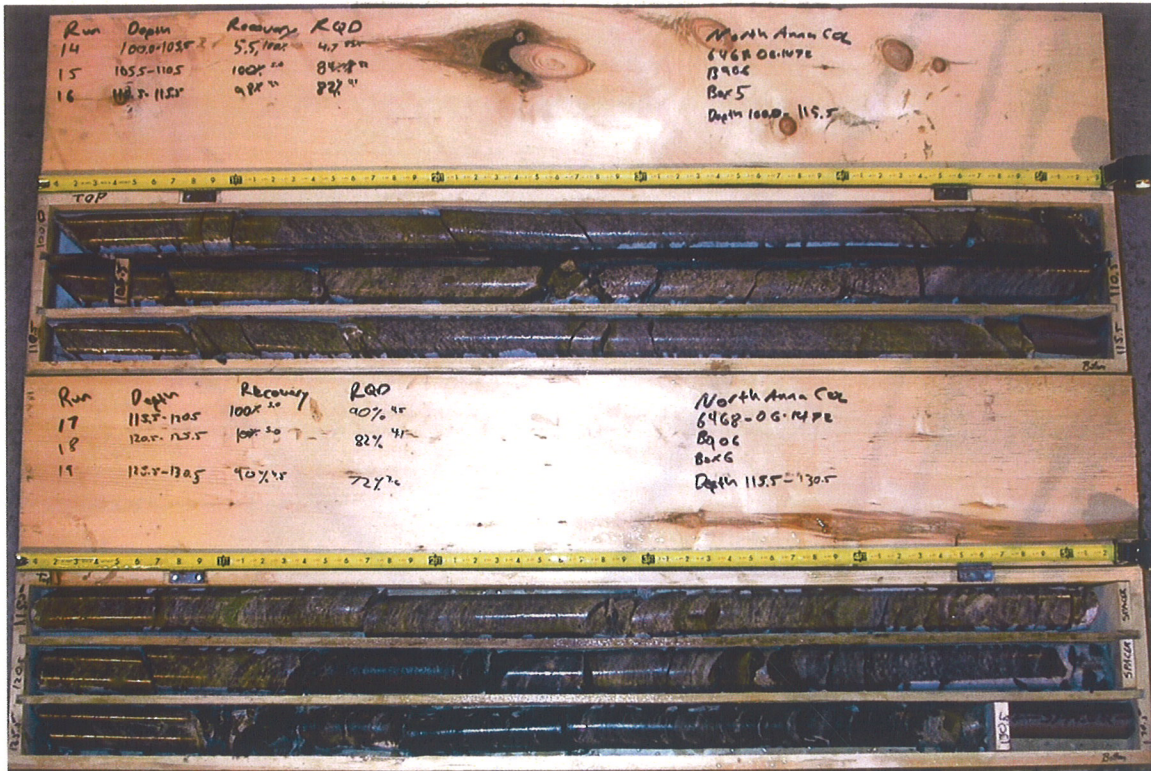
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B-906 - Box 2



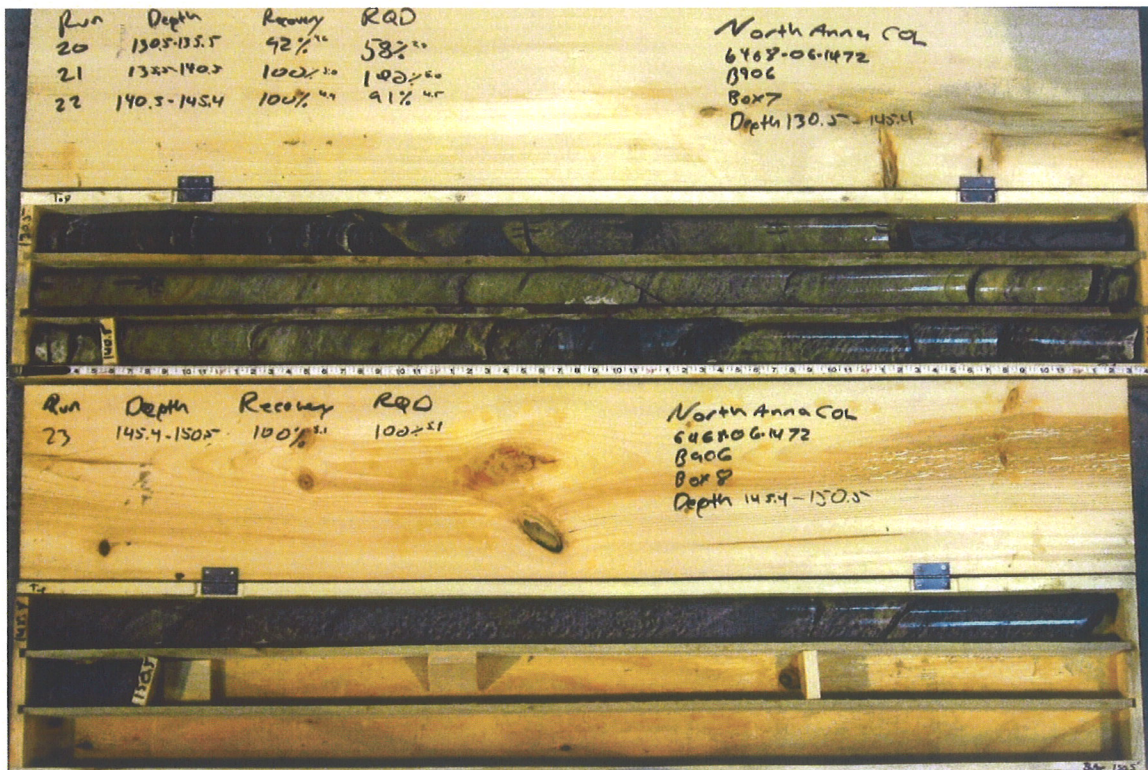
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B-906 - Box 4



B-906 – Box 5

B-906 – Box 6



B-906 – Box 7

B-906 – Box 8