



MACTEC PROJECT NO.: 6468-06-1472					COUNTY Louisa, VA					GEOLOGIST S. Nicely				
SITE DESCRIPTION NORTH ANNA COL										GROUND WATER (ft)				
BORING NO. B-913		DRILL METHOD: Mud Rotary/Core				SAMPLE METHODS: SPT/CORE				0 HR. 8.1				
COLLAR ELEV. 273.4 ft (NAVD88)		NORTHING 3,910,149		US ft (NAD83)		EASTING 11,686,115		US ft (NAD83)		24 HR. ND				
TOTAL DEPTH 100.9 ft		DRILL MACHINE CME 55 Truck				DRILLER: H. Meyerson				HAMMER TYPE 140 lbs Auto				
DATE STARTED 10/30/06		COMPLETED 11/1/06				CORE BARREL TYPE: HQ 3 triple tube-wireline								
ELEV.	DEPTH	BLOW COUNT			BLOWS PER FOOT					SAMP.	LOG	SOIL AND ROCK DESCRIPTION		
(ft)	(ft)	0.5ft	0.5ft	0.5ft	0	20	40	60	80	100			NO.	
273.4					Ground Surface							273.4 0.0		
												No samples due to utility clearance operations -Soft dig/vac. truck excavation to 8.4 ft		
263.2	10.2									913-1		265.0 8.4		
261.4	12.0	2	1	3						913-2				
		5	5	4										
254.9	18.5									913-3		258.4 15.0		
		8	6	8								Silty, fine to coarse SAND (SM), light yellowish brown (2.5Y 6/4), moist, medium dense (Residual Soil)		
249.6	23.8									913-4				
		5	7	8										
244.6	28.8									913-5				
		9	11	12										
239.9	33.5									913-6				
		11	12	15										
234.9	38.5									913-7		237.4 36.0		
		11	15	18								Silty, fine to coarse SAND (SM), light yellowish brown (2.5Y 6/4) to brownish yellow (10YR 6/8-6/6), moist, dense to very dense (Residual Soil)		
229.9	43.5									913-8				
		14	19	23										
224.9	48.5									913-9		223.4 50.0		
		24	31	49								Weathered Rock: Brownish yellow, moist, very dense, weathered, BIOTITE-QUARTZ GNEISS		
219.9	53.5									913-10				
		24	46	50/0.3										
215.5	57.9									913-11		215.5 57.9		
		50/0.0										Hard Rock: Light gray to gray, moderately weathered to fresh, close to moderately close fracturing, very hard, BIOTITE-QUARTZ GNEISS		

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



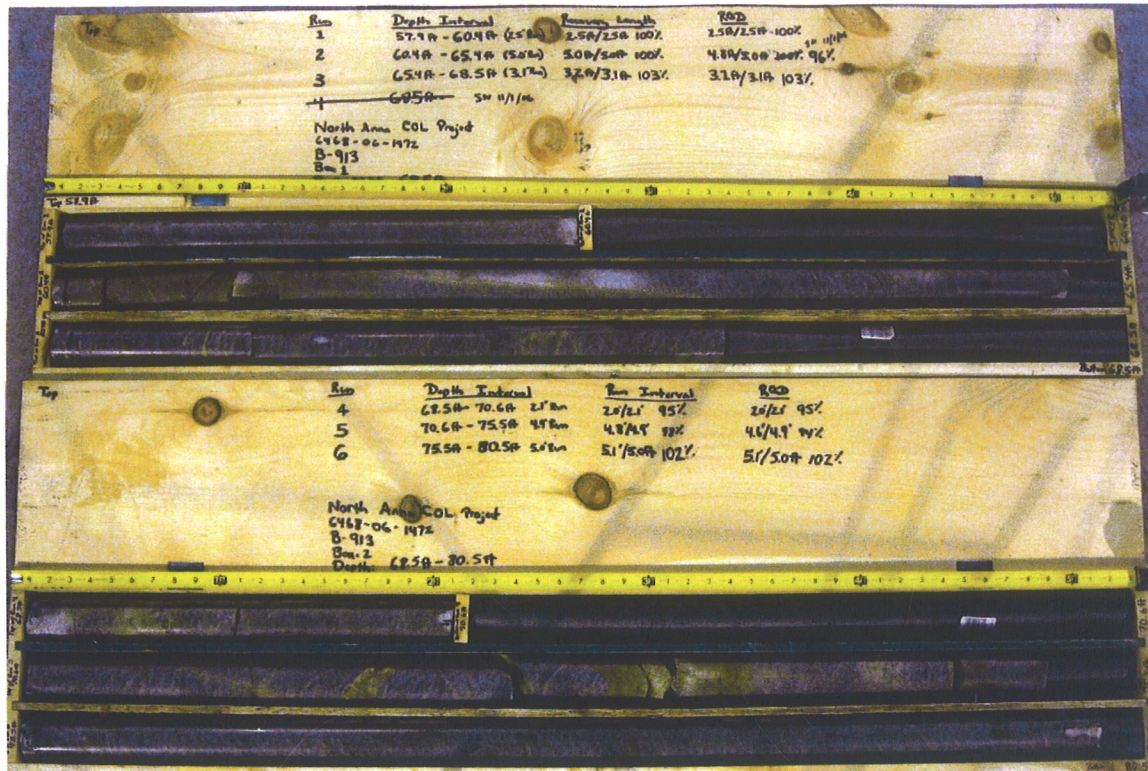
MACTEC PROJECT NO.: 6468-06-1472										COUNTY Louisa, VA					GEOLOGIST S. Nicely				
SITE DESCRIPTION NORTH ANNA COL															GROUND WATER (ft) 0 HR. 8.1 24 HR. ND				
BORING NO. B-913					DRILL METHOD: Mud Rotary/Core					SAMPLE METHODS: SPT/CORE									
COLLAR ELEV. 273.4 ft (NAVD88)					NORTHING 3,910,149 US ft (NAD83)					EASTING 11,686,115 US ft (NAD83)					TOTAL DEPTH 100.9 ft				
DRILL MACHINE CME 55 Truck					DRILLER: H. Meyerson					HAMMER TYPE 140 lbs Auto					DATE STARTED 10/30/06				
COMPLETED 11/1/06					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									
198.6					Continued from previous page														
														197.9	75.5	Hard Rock: Light gray to gray, slightly weathered to fresh, wide to very wide fracturing, very hard, BIOTITE-QUARTZ GNEISS			
														172.5	100.9	Boring and coring terminated at 100.9 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



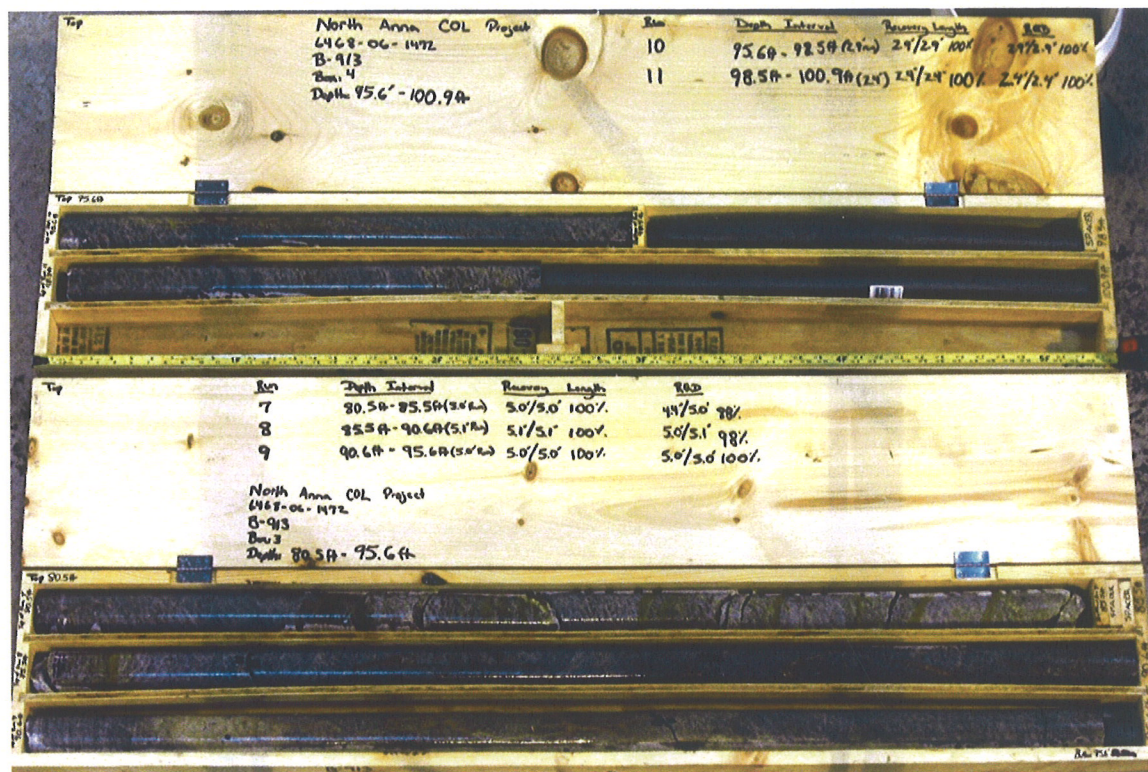
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SITE DESCRIPTION NORTH ANNA COL										GROUND WATER (ft)		
BORING NO. B-913			DRILL METHOD: Mud Rotary/Core				SAMPLE METHODS: SPT/CORE			0 HR. 8.1		
COLLAR ELEV. 273.4 ft (NAVD88)			NORTHING 3,910,149		US ft (NAD83)		EASTING 11,686,115		US ft (NAD83)		24 HR. ND	
TOTAL DEPTH 100.9 ft			DRILL MACHINE CME 55 Truck				DRILLER: H. Meyerson			HAMMER TYPE 140 lbs Auto		
DATE STARTED 10/30/06				COMPLETED 11/1/06			CORE BARREL TYPE: HQ 3 triple tube-wireline					
CORE SIZE HQ3				TOTAL RUN 43.0 ft								
ELEV. (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. RQD (ft) (%)		SAMP. NO.	STRATA REC. RQD (ft) (%)		L O G	DESCRIPTION AND REMARKS		
										Begin Coring @ 57.9 ft		
215.5	57.9	2.5	N=50/0.0 6:35	(2.5)	(2.5)	1				215.5	57.9	
213.0	60.4		8:12	100%	100%					Hard Rock: Light gray to gray, moderately weathered to fresh, close to moderately close fracturing, very hard, BIOTITE-QUARTZ GNEISS		
		5.0	14:22/0.5	(5.0)	(4.8)	2				-No Joints		
			5:19	100%	96%					(1 joint at 20°, 1 joint at 35° both with Fe stain)		
208.0	65.4		6:38									
		3.1	8:57	(3.2)	(3.2)	3				(1 joint at 15° with Fe stain)		
			10:22	103%	103%							
204.9	68.5		15:23									
		2.1	6:36	(2.0)	(2.0)	4				(1 joint at 10° with Fe stain)		
			8:52	95%	95%							
202.8	70.6		11:03/1.1									
		4.9	7:45	(4.8)	(4.6)	5				(1 joint at 15° with clay and Fe stain)		
			4:25/1.1	98%	94%							
			4:58									
			4:23									
			4:38									
			3:58									
197.9	75.5		5:04/0.9							197.9	75.5	
		5.0	6:20	(5.1)	(5.1)	6				Hard Rock: Light gray to gray, slightly weathered to fresh, wide to very wide fracturing, very hard, BIOTITE-QUARTZ GNEISS		
			7:29	102%	102%					-No Joints		
			8:44									
192.9	80.5		9:48									
		5.0	12:53	(5.0)	(4.4)	7				(7 joints at 20-30° with Fe stain; Quartz vein from 82.9-83.0 ft with Fe stain; very close to close fracturing)		
			6:11	100%	88%							
			4:21									
			6:21									
187.9	85.5		3:56									
		5.1	3:59	(5.1)	(5.0)	8				-No Joints		
			4:42	100%	98%							
			6:16									
			8:23									
182.8	90.6		8:52									
		5.0	12:10/1.1	(5.0)	(5.0)	9				-Quartz vein from 91.3-91.8 ft with magnetite		
			4:53	100%	100%							
			5:55									
			6:44									
177.8	95.6		5:30									
		2.9	6:42	(2.9)	(2.9)	10				-No Joints		
			8:11	100%	100%							
174.9	98.5		12:07/0.9									
		2.4	5:29	(2.4)	(2.4)	11				-No Joints		
			6:12	100%	100%							
172.5	100.9		2:18/0.4							172.5	100.9	
										Coring terminated at 100.9 ft in Hard Rock: Very hard, BIOTITE-QUARTZ GNEISS		

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B-913 - Box 1

B-913 - Box 2



B-913 - Box 4

B-913 - Box 3