



MACTEC PROJECT NO.: 6468-06-1472				COUNTY Louisa, VA				GEOLOGIST J. Lachewitz					
SITE DESCRIPTION NORTH ANNA COL										GROUND WATER (ft)			
BORING NO. B-951		DRILL METHOD: Mud Rotary/Core				SAMPLE METHODS: SPT/CORE				0 HR. 9.0			
COLLAR ELEV. 249.9 ft (NAVD88)		NORTHING 3,910,548		US ft (NAD83)		EASTING 11,686,822		US ft (NAD83)		24 HR. 5.3			
TOTAL DEPTH 101.0 ft		DRILL MACHINE CME 550 ATV				DRILLER: G. Akins				HAMMER TYPE 140 lbs Auto			
DATE STARTED 8/16/06			COMPLETED 8/17/06			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				
175.1					Continued from previous page								
													Hard Rock: White, slightly weathered to fresh, close to wide fracturing, moderately hard to very hard, QUARTZ GNEISS with biotite and trace magnetite (continued)
													Boring and coring terminated at 101.0 ft in Hard Rock: Very hard, QUARTZ GNEISS with biotite

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

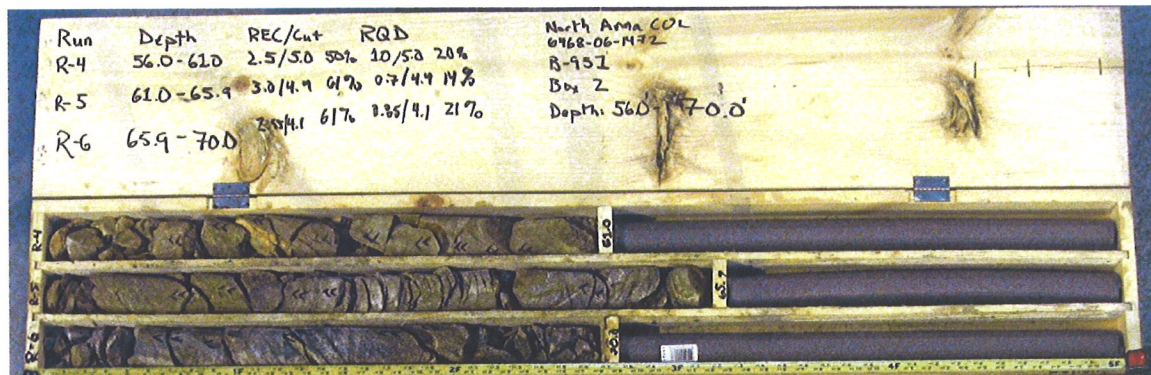


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COLLAR ELEV. 249.9 ft (NAVD88)			NORTHING 3,910,548		US ft (NAD83)		EASTING 11,686,822		US ft (NAD83)		24 HR. 5.3	
TOTAL DEPTH 101.0 ft			DRILL MACHINE CME 550 ATV			DRILLER: G. Akins			HAMMER TYPE 140 lbs Auto			
DATE STARTED 8/16/06			COMPLETED 8/17/06			CORE BARREL TYPE: HQ 3 triple tube-wireline						
CORE SIZE HQ3			TOTAL RUN 60.4 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 @ 40.6 ft		
209.3	40.6	5.4	1:19 1:20 1:27 1:46 1:28/1.4	(4.3) 80%	(3.4) 63%	1				209.3 Hard Rock: Light reddish brown, reddish brown, pinkish white, bluish gray, and white, moderately severe to slightly weathered, very close to close fracturing, soft to moderately hard, QUARTZ GNEISS with biotite (4 joints at 0-60° with trace clay and Fe staining)		
203.9	46.0	5.0	1:59 1:05 1:11 1:28 1:16	(2.5) 50%	(1.6) 32%	2				(4 joints at 15-35° with trace clay and Fe staining)		
198.9	51.0	5.0	1:07 1:10 0:44 1:07 1:21	(4.0) 79%	(1.9) 38%	3				-Multiple joints throughout with trace clay and Fe staining		
193.9	56.0	5.0	2:00 2:00 2:00 0:57 1:30	(2.5) 50%	(1.0) 20%	4				-Multiple joints throughout with trace clay and Fe staining		
188.9	61.0	4.9	1:24 1:18 1:20 1:19 1:18/0.9	(3.0) 61%	(0.7) 14%	5				-Multiple joints throughout; quartz vein from 64.7-64.9 ft		
184.0	65.9	4.1	1:19 2:40 1:45 2:23	(2.6) 63%	(0.9) 22%	6				(4 joints at 10-45° with Fe staining)		
179.9	70.0	5.9	1:46/0.1 3:30 2:19 2:10 2:13 1:59 3:06/0.9	(5.9) 100%	(4.0) 68%	7				179.9 Hard Rock: White, slightly weathered to fresh, close to wide fracturing, moderately hard to very hard, QUARTZ GNEISS with biotite and trace magnetite (10 joints at 5-50° with Fe staining)		
174.0	75.9	4.9	2:36 3:03 4:01 4:53 8:12/0.9	(4.9) 100%	(4.9) 100%	8				(Quartz vein at 35° at 78.6 ft with hornblende)		
169.1	80.8	5.0	6:00 3:27 4:32 4:41 6:21	(5.0) 100%	(5.0) 100%	9				(2 joints at 35° with slight weathering)		
164.1	85.8	5.1	3:09 3:10 2:38 3:33 3:48/1.1	(5.1) 100%	(5.1) 100%	10				(1 joint at 35° with very slight weathering)		
159.0	90.9	4.6	4:06 3:04 3:17 6:15 7:56/0.6	(4.6) 100%	(4.6) 100%	11				(2 joints at 40° with very slight weathering)		
154.4	95.5	5.5	4:15 2:44 2:48 2:36 6:09/1.5	(5.0) 91%	(4.3) 78%	12				(Quartz vein at 99.5-100.5 ft)		
148.9	101.0									148.9 Coring terminated at 101.0 ft in Hard Rock: Very hard, QUARTZ GNEISS with biotite		

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



B-951 - Box 1



B-951 - Box 2

B-951 - Box 3

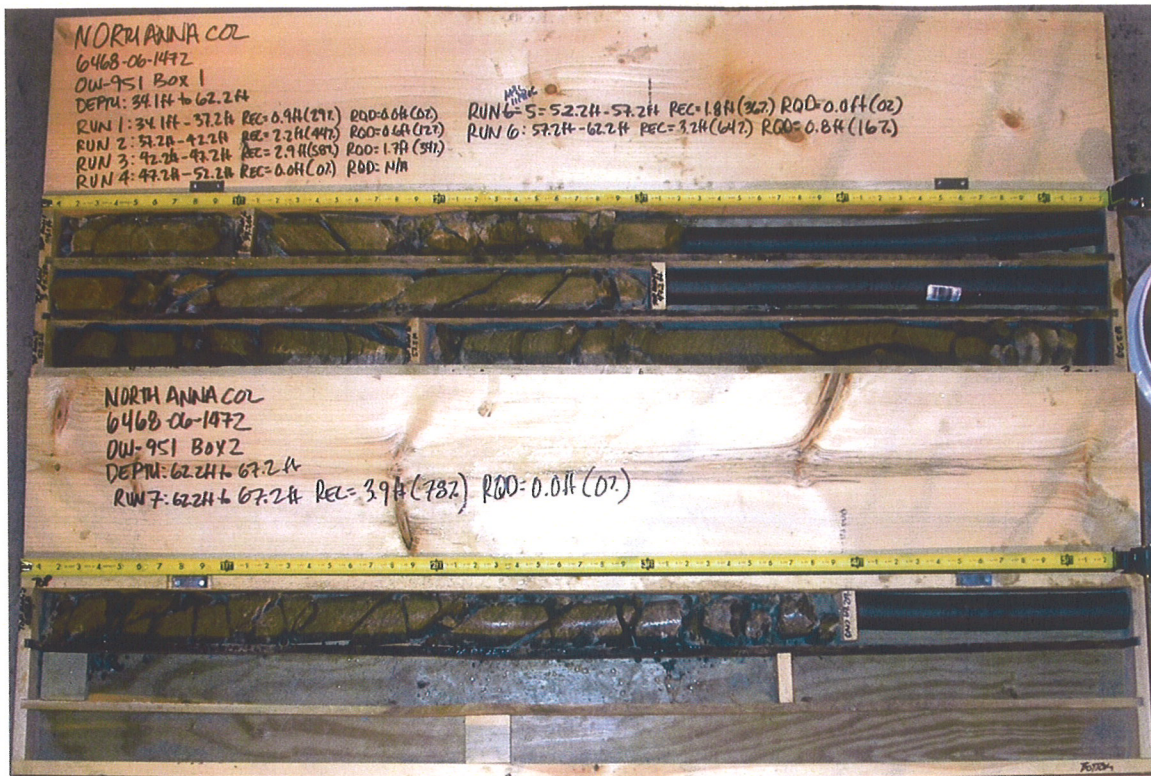


B-951 - Box 4
B-951 - Box 5



MACTEC PROJECT NO.: 6468-06-1472				COUNTY Louisa, VA				GEOLOGIST M. Lear/ K. Charles-Smith			
SITE DESCRIPTION NORTH ANNA COL										GROUND WATER (ft)	
BORING NO. OW-951		DRILL METHOD: HSA/Core				SAMPLE METHODS: CORE				0 HR. ND	
COLLAR ELEV. 249.7 ft (NAVD88)		NORTHING 3,910,521		US ft (NAD83)		EASTING 11,686,786		US ft (NAD83)		24 HR. ND	
TOTAL DEPTH 67.2 ft		DRILL MACHINE CME 55LC Track				DRILLER: D. White				HAMMER TYPE NA	
DATE STARTED 11/8/06				COMPLETED 11/9/06				CORE BARREL TYPE: HQ 3 triple tube-wireline			
CORE SIZE HQ3				TOTAL RUN 33.1 ft							
ELEV. (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN		SAMP. NO.	STRATA		L O G	DESCRIPTION AND REMARKS	
				REC. (ft) %	RQD (ft) %		REC. (ft) %	RQD (ft) %			
										Begin Coring @ 34.1 ft	
215.6	34.1	3.1	4:20 1:05	(0.9) 29%	(0.0) 0%	1				214.7 Hard Rock: Tan-orange, moderately severely weathered, closely fractured, medium hard, BIOTITE-QUARTZ GNEISS	
212.5	37.2		1:08							(4 joints at 40-50° with clay and orange Fe stain)	
		5.0	1:08/0.1	(2.2) 44%	(0.6) 12%	2				Weathered Rock: No Recovery-BIOTITE-QUARTZ GNEISS	
			0:52 0:53 1:05 1:08 1:36							209.7	
207.5	42.2									40.0 Hard Rock: Tan, moderately severe to moderately weathered, very closely to closely fractured, medium hard to moderately hard, BIOTITE-QUARTZ GNEISS (7 joints at 40-50° with clay and orange-brown Fe stain)	
		5.0	1:55 2:18 1:45 1:48 1:13	(2.9) 58%	(1.7) 34%	3				204.6	
202.5	47.2									45.1 Weathered Rock: No Recovery-BIOTITE-QUARTZ GNEISS	
		5.0	1:06 1:33 1:47 1:44 1:24	(0.0) 0%	(0.0) 0%	4				-No Recovery	
197.5	52.2										
		5.0	2:15 1:34 2:02 1:58 2:16	(1.8) 36%	(0.0) 0%	5				194.3	
192.5	57.2									55.4 Hard Rock: Tan-gray to gray, moderately to slightly weathered, very closely to closely fractured, moderately hard, BIOTITE-QUARTZ GNEISS	
		5.0	2:05 2:07 2:00 2:05 2:14	(3.2) 64%	(0.8) 16%	6				-Numerous joints at 40-50° with clay and orange-brown Fe stain.	
187.5	62.2										
		5.0	1:49 2:23 2:34 3:24 6:10	(3.8) 76%	(0.8) 16%	7				-Numerous joints at 45-50° with trace clay and Fe stain.	
182.5	67.2									182.5	
										Coring terminated at 67.2 ft in Hard Rock: Moderately hard, BIOTITE-QUARTZ GNEISS	
										Note: 4.25" Hollow Stem Augers advanced to 34.1 ft without SPT's, boring then advanced with core tools.	

NORTH ANNA COL CORE NORTH ANNA COL DATA REPORT REV0.GPJ NORTH ANNA COL_GDT 1/24/07



OW-951 – Box 1
OW-951 – Box 2