

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



SHEET 1 OF 2

MACTEC PROJECT NO.: 6468-06-1472							COUNTY Louisa, VA			GEOLOGIST J. Wallen		
SITE DESCRIPTION NORTH ANNA COL										GROUND WATER (ft)		
BORING NO. B-918			DRILL METHOD: Mud Rotary/Core				SAMPLE METHODS: SPT/CORE				0 HR. 4.4	
COLLAR ELEV. 272.1 ft (NAVD88)			NORTHING 3,910,115		US ft (NAD83)		EASTING 11,686,194		US ft (NAD83)		24 HR. 4.8	
TOTAL DEPTH 150.1 ft			DRILL MACHINE CME 45 Trailer				DRILLER: D. Rhodes				HAMMER TYPE 140 lbs Auto	
DATE STARTED 9/20/06				COMPLETED 9/27/06				CORE BARREL TYPE: HQ 3 triple tube-wireline				
CORE SIZE HQ3				TOTAL RUN 123.8 ft								
ELEV. (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %		ROD (ft) %	SAMP. NO.	STRATA REC. (ft) %		RQD (ft) %	L O G	DESCRIPTION AND REMARKS
												Begin Coring @ 26.3 ft
245.8	26.3	4.0	N=50/0.0 7:59 5:47 0:50 7:00	(3.0) 75%	(1.5) 38%	1						245.8 Hard Rock: Dark to light gray, moderately severe to slightly weathered, close to moderately close fracturing, soft to hard, BIOTITE-QUARTZ GNEISS (4 joints at 60°; 3 joints at 45°)
241.8	30.3	2.0	10:04 12:40	(1.9) 95%	(1.3) 65%	UC-31.7'						(3 joints at 60° with Fe stain)
239.8	32.3	2.8	5:54 5:45 7:45/0.8	(2.6) 93%	(2.6) 93%	3						(1 joint at 60°; Quartz vein from 33.5-33.6 ft)
237.0	35.1	5.1	6:21 4:47 4:13 1:48 3:51/1.1	(5.0) 98%	(4.7) 92%	UCS-37.1'						(1 joint at 60°, 3 joints at 40°, 1 joint at 20°)
231.9	40.2	5.0	3:44 3:12 3:48 3:13 3:40	(5.0) 100%	(5.0) 100%	5						(1 joint at 60°; Quartz vein from 44.7-45.2 ft)
226.9	45.2	5.0	2:52 2:56 2:34 2:42 3:00	(5.0) 100%	(4.7) 94%	6						(3 joints at 70°; Quartz+K-feldspar+biotite vein at 70° from 48.4-49.0 ft)
221.9	50.2	5.0	2:33 2:21 2:21 2:18 1:55	(5.0) 100%	(5.0) 100%	UC-51.6'						(1 joint at 70°, 1 joint at 55°)
216.9	55.2	5.0	1:53 1:50 1:38 1:42 2:15	(5.0) 100%	(4.2) 84%	8						(5 joints at 50°, 1 joint at 70°)
211.9	60.2	4.9	4:24 3:13 3:43 3:48 3:57/0.9	(4.9) 100%	(4.9) 100%	UC-60.7'						(2 joints at 20°, 1 joint at 50°)
207.0	65.1	1.1	4:24/1.1	(1.1) 100%	(1.1) 100%	10						207.0 Hard Rock: Light gray, fresh, moderately close to very wide fracturing, very hard, BIOTITE-QUARTZ GNEISS with trace magnetite
205.9	66.2	4.0	4:02 4:20 4:52 6:33	(4.0) 100%	(4.0) 100%	11						-No Joints (1 joint at 50°)
201.9	70.2	5.0	5:53 12:48 35:12 2:28 3:05	(5.0) 100%	(5.0) 100%	12						(2 joints at 75°)
196.9	75.2	5.0	2:51 3:22 3:41 3:57 4:18	(5.0) 100%	(5.0) 100%	13						-No Joints
191.9	80.2	4.9	4:08 6:33 8:08 13:19 7:05/0.9	(4.9) 100%	(4.9) 100%	14						-No Joints
187.0	85.1	5.0	5:37 4:46 4:17 4:08 4:41	(5.0) 100%	(5.0) 100%	UCS-88.1'						(1 joint at 20°)
182.0	90.1	5.0	6:28 9:42 9:11 13:39 6:17	(5.0) 100%	(5.0) 100%	16						(1 joint at 40°; Quartz vein from 96.1-97.1 ft with trace pyrite)
177.0	95.1	5.0	9:21 10:14 12:12 8:10 8:23	(5.0) 100%	(5.0) 100%	17						-No Joints
172.0	100.1	5.0	14:03	(5.0) 100%	(5.0) 100%	18						(1 joint at 10°)

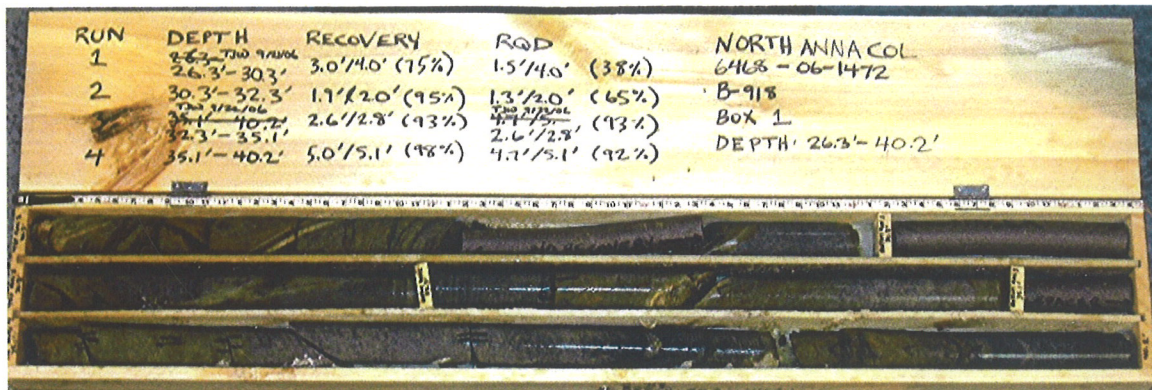
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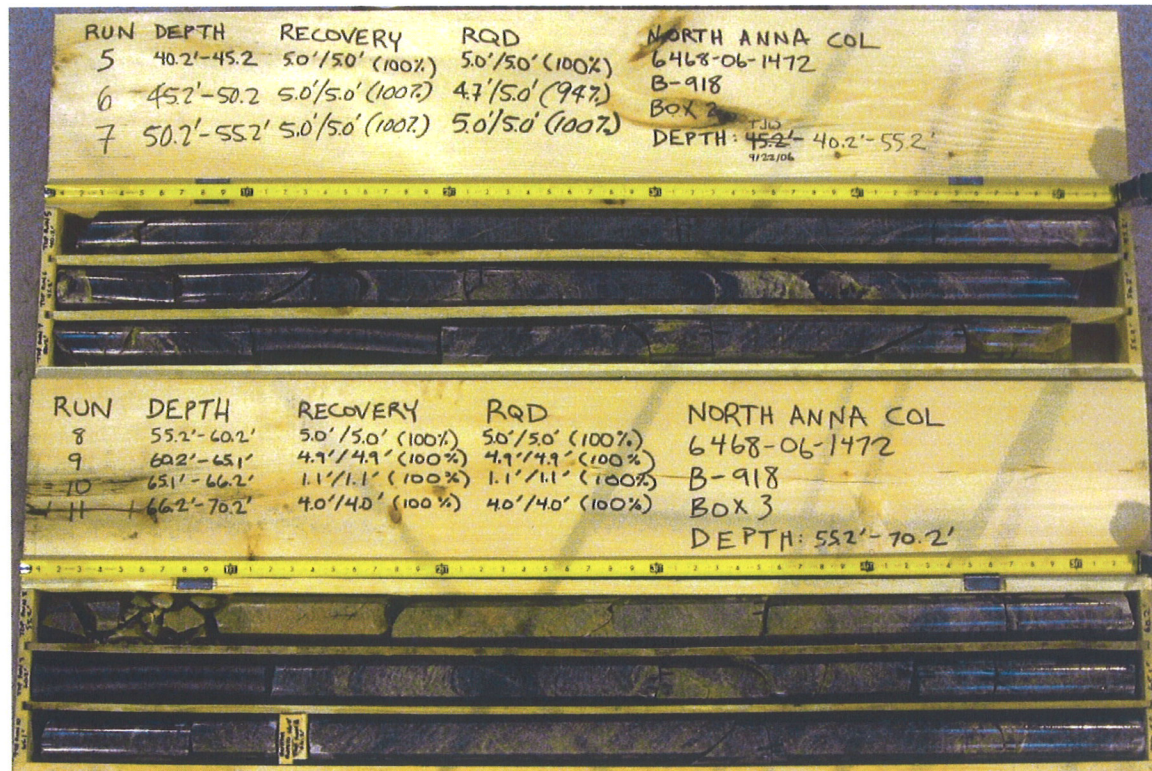
SHEET 2 OF 2

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CORE SIZE HQ3			TOTAL RUN 123.8 ft										
ELEV. (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %		ROD (ft) %	SAMP. NO.	STRATA REC. (ft) %		ROD (ft) %	L O G	DESCRIPTION AND REMARKS	
												Continued from previous page	
167.0	105.1		8:59 14:24 23:56 8:00	100%	100%							Hard Rock: Light gray, fresh, moderately close to very wide fracturing, very hard, BIOTITE-QUARTZ GNEISS with trace magnetite (continued)	
		5.0	7:19 7:03 12:11 15:59 12:44	(5.0) 100%	(4.0) 80%	19						Hard Rock: Light gray to gray, moderately severe to slightly weathered, very close to moderately close fracturing, medium hard to very hard, BIOTITE-QUARTZ GNEISS (8 joints at 30°)	
162.0	110.1		4:46 2:46 3:01 3:30 3:51	(4.9) 98%	(1.6) 32%	20						(13 joints at 30°; 2 joints at 70°)	
		5.0	4:15 4:33 5:14 4:41 4:48	(5.0) 100%	(5.0) 100%	21						Hard Rock: Light gray, slightly weathered to fresh, close to very wide fracturing, very hard, BIOTITE-QUARTZ GNEISS (1 joint at 70°)	
152.0	120.1		4:49 5:10 5:11 5:58 3:22/0.9	(4.9) 100%	(4.9) 100%	UC-122.0'						-No Joints	
		4.9	6:16 4:34 4:55 3:12 8:20/1.1	(5.1) 100%	(5.0) 98%	23						(3 joints at 30°)	
147.1	125.0		4:59 3:59 3:29 3:28 2:50	(5.0) 100%	(4.4) 88%	24						(2 joints at 60°; 3 joints at 20-30°)	
		5.1	3:51 3:41 3:41 4:25 5:39	(5.0) 100%	(5.0) 100%	25						(Quartz+K-feldspar vein at 60° from 136.0-136.1 ft)	
142.0	130.1		7:31 9:54 6:42 6:44 8:40	(5.0) 100%	(5.0) 100%	26						-No Joints	
		5.0	4:51 5:36 6:32 8:23 9:19	(5.0) 100%	(5.0) 100%	27						-No Joints	
137.0	135.1												
		5.0											
132.0	140.1												
		5.0											
127.0	145.1												
		5.0											
122.0	150.1												
												Coring terminated at 150.1 ft in Hard Rock: Very hard, BIOTITE-QUARTZ GNEISS	

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B-918 - Box 1



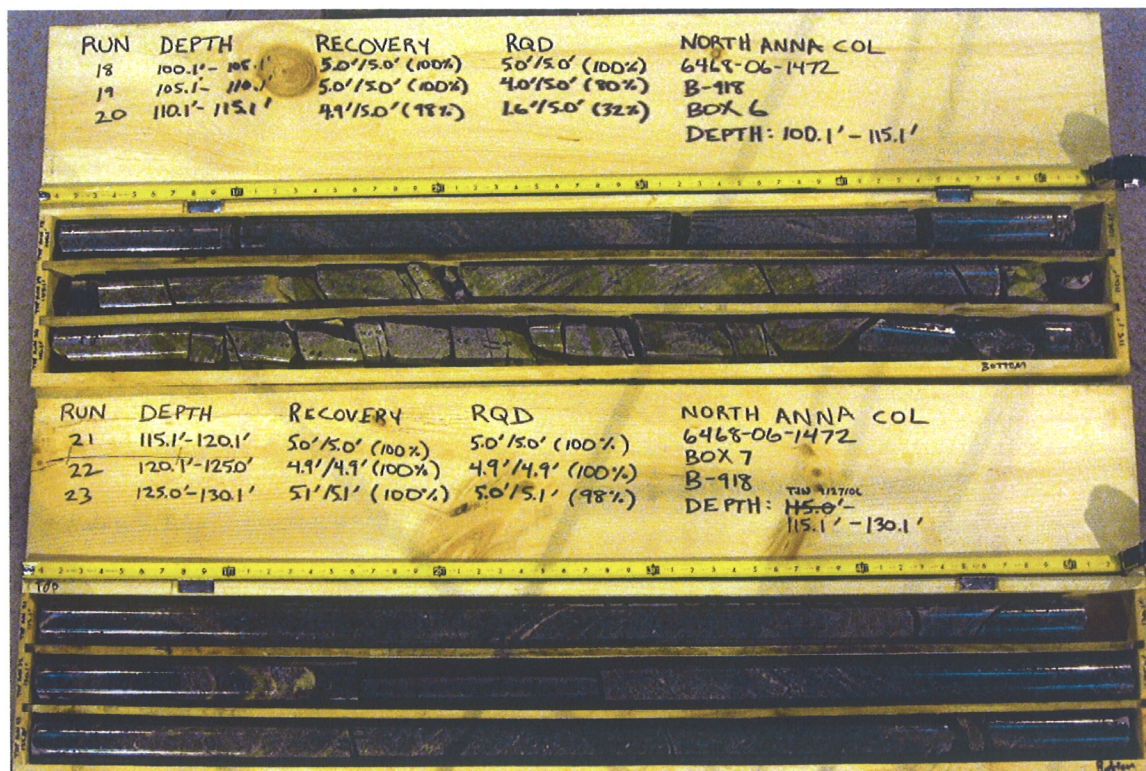
B-918 - Box 2

B-918 - Box 3



B-918 - Box 4

B-918 - Box 5



B-918 - Box 6

B-918 - Box 7



B-918 - Box 8

B-918 - Box 9