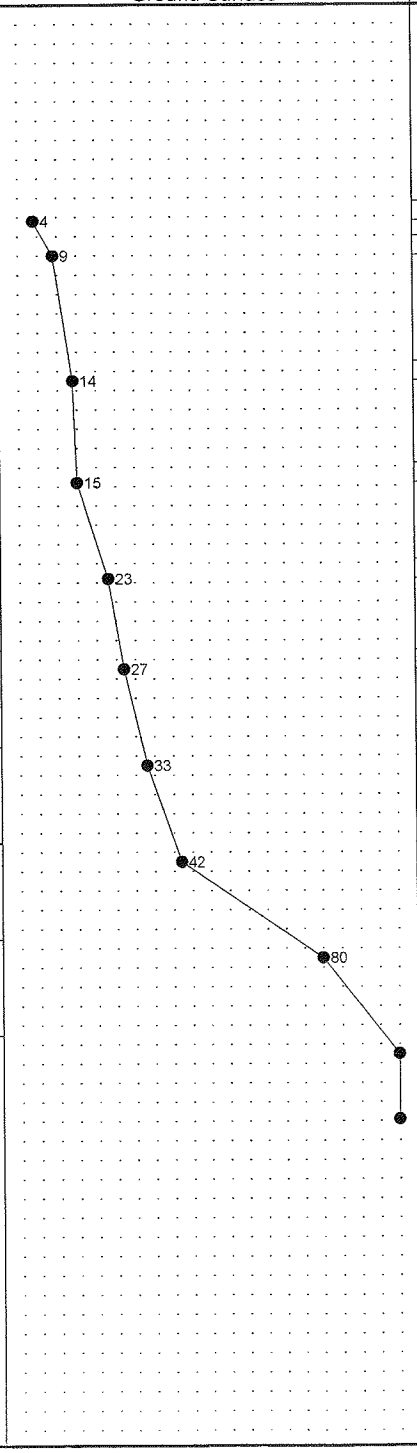
GEOTECHNICAL BORING LOG

MACTEC

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. (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	SAMP. NO.	SOIL AND ROCK DESCRIPTION
273.4						Ground Surface (273.4, 0.0)
						No samples due to utility clearance operations -Soft dig/vac. truck excavation to 8.4 ft (265.0, 8.4)
263.2	10.2					Silty, fine to coarse SAND (SM), yellowish brown (10YR 5/6), wet, loose (Residual Soil)
261.4	12.0	2	1	3	913-1	
		5	5	4	913-2	(258.4, 15.0)
254.9	18.5					Silty, fine to coarse SAND (SM), light yellowish brown (2.5Y 6/4), moist, medium dense (Residual Soil)
		8	6	8	913-3	
249.6	23.8					
		5	7	8	913-4	
244.6	28.8					
		9	11	12	913-5	
239.9	33.5					
		11	12	15	913-6	(237.4, 36.0)
234.9	38.5					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)
		11	15	18	913-7	
229.9	43.5					
		14	19	23	913-8	
224.9	48.5					
		24	31	49	913-9	(223.4, 50.0)
219.9	53.5					Weathered Rock: Brownish yellow, moist, very dense, weathered, BIOTITE-QUARTZ GNEISS
		24	46	50/0.3	913-10	
215.5	57.9					(215.5, 57.9)
		50/0.0			913-11	Hard Rock: Light gray to gray, moderately weathered to fresh, close to moderately close fracturing, very hard, BIOTITE-QUARTZ GNEISS

BLOWS PER FOOT (0, 20, 40, 60, 80, 100)



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LOG

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

GEOTECHNICAL BORING LOG

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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
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
DATE STARTED 10/30/06	COMPLETED 11/1/06	CORE BARREL TYPE: HQ 3 triple tube-wireline

GROUND WATER (ft)	
0 HR.	8.1
24 HR.	ND

HAMMER TYPE 140 lbs Auto

ELEV. (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 20 40 60 80 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
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

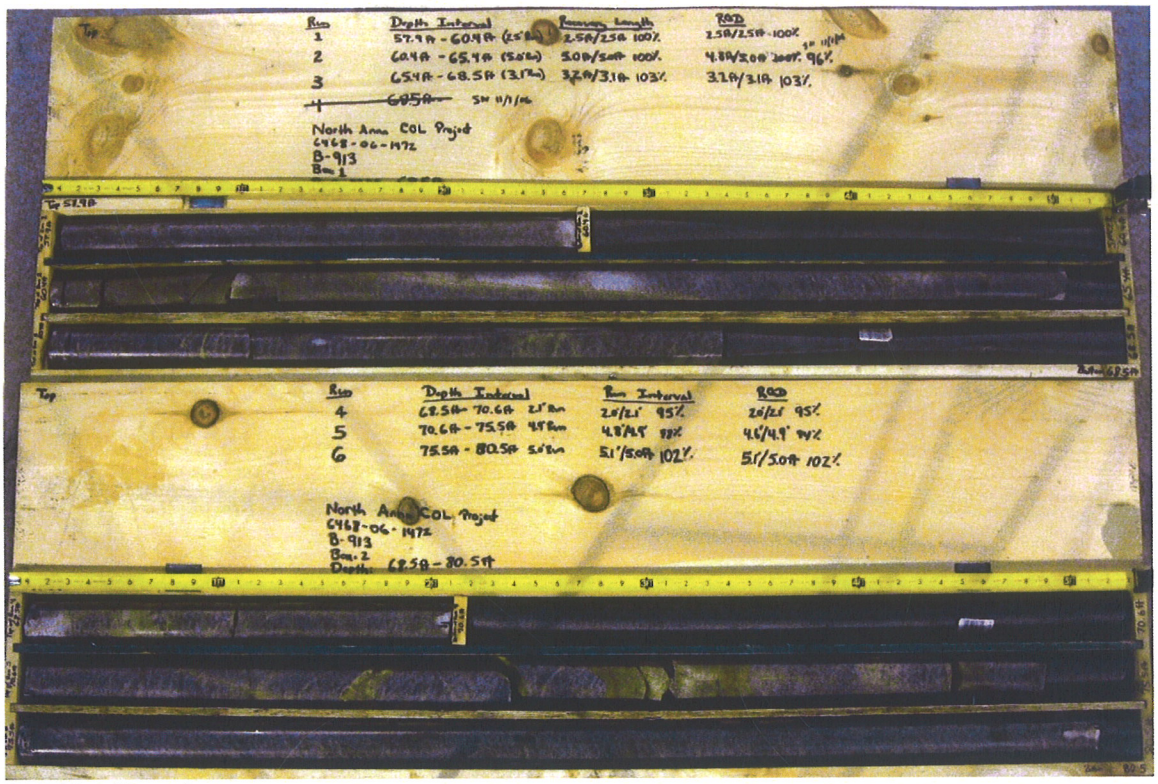
GEOTECHNICAL CORING LOG

MACTEC

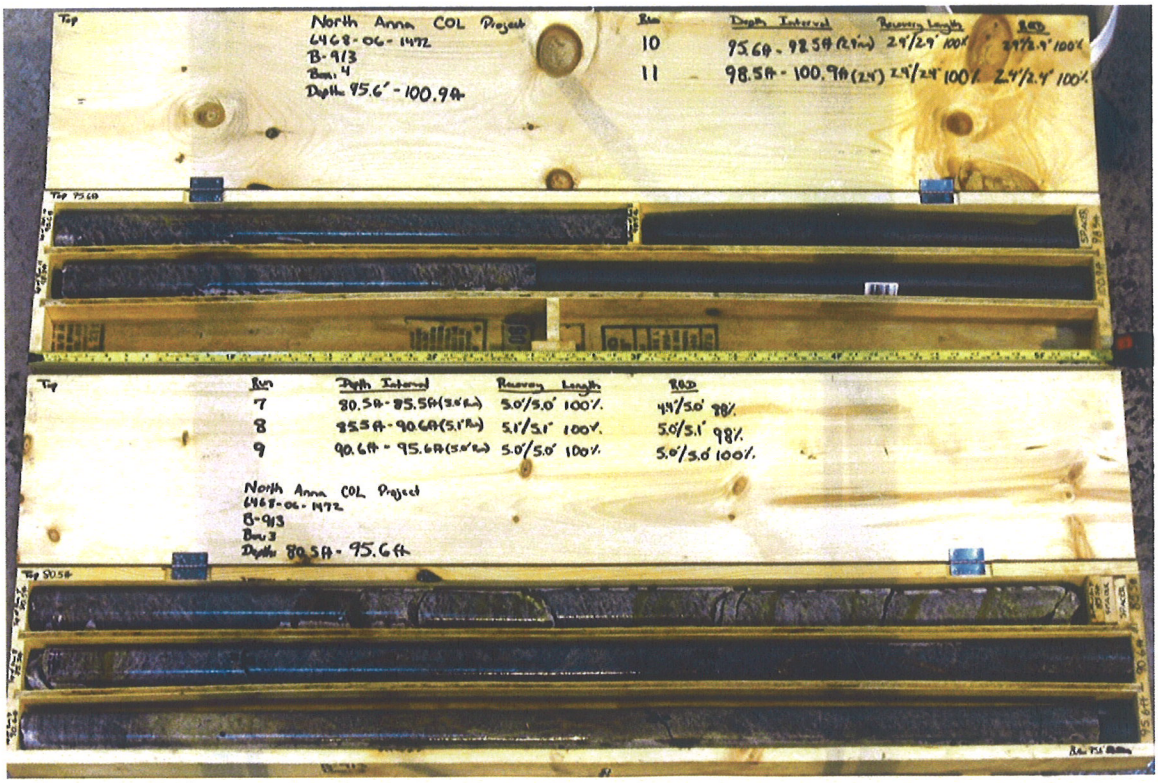
MACTEC PROJECT NO.: 6468-06-1472	**COUNTY** Louisa, VA	**GEOLOGIST** S. Nicely
SITE DESCRIPTION NORTH ANNA COL		**GROUND WATER (ft)**
BORING NO. B-913	**DRILL METHOD:** Mud Rotary/Core	**SAMPLE METHODS:** SPT/CORE — 0 HR. 8.1
COLLAR ELEV. 273.4 ft (NAVD88)	**NORTHING** 3,910,149 US ft (NAD83)	**EASTING** 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
CORE SIZE HQ3	**TOTAL RUN** 43.0 ft	

ELEV. (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS
										Begin Coring @ 57.9 ft
215.5	57.9	2.5	N=50/0.0	(2.5)	(2.5)	1				215.5 — 57.9 Hard Rock: Light gray to gray, moderately weathered to fresh, close to moderately close fracturing, very hard, BIOTITE-QUARTZ GNEISS
213.0	60.4		6:35 8:12 14:22/0.5	100%	100%					-No Joints
		5.0	5:19 6:38 8:57 10:22 15:23	(5.0) 100%	(4.8) 96%	2				(1 joint at 20°, 1 joint at 35° both with Fe stain)
208.0	65.4									
		3.1	6:36 8:52 11:03/1.1	(3.2) 103%	(3.2) 103%	3				(1 joint at 15° with Fe stain)
204.9	68.5									
		2.1	7:45 4:25/1.1	(2.0) 95%	(2.0) 95%	4				(1 joint at 10° with Fe stain)
202.8	70.6									
		4.9	4:58 4:23 4:38 3:58 5:04/0.9	(4.8) 98%	(4.6) 94%	5				(1 joint at 15° with clay and Fe stain)
197.9	75.5									197.9 — 75.5
		5.0	6:20 7:29 8:44 9:48 12:53	(5.1) 102%	(5.1) 102%	6				Hard Rock: Light gray to gray, slightly weathered to fresh, wide to very wide fracturing, very hard, BIOTITE-QUARTZ GNEISS -No Joints
192.9	80.5									
		5.0	6:11 4:21 6:21 3:56 3:59	(5.0) 100%	(4.4) 88%	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)
187.9	85.5									
		5.1	4:42 6:16 8:23 8:52 12:10/1.1	(5.1) 100%	(5.0) 98%	8				-No Joints
182.8	90.6									
		5.0	4:53 5:55 6:44 5:30 6:42	(5.0) 100%	(5.0) 100%	9				-Quartz vein from 91.3-91.8 ft with magnetite
177.8	95.6									
		2.9	6:20 8:11 12:07/0.9	(2.9) 100%	(2.9) 100%	10				-No Joints
174.9	98.5									
		2.4	5:29 6:12 2:18/0.4	(2.4) 100%	(2.4) 100%	11				-No Joints
172.5	100.9									172.5 — 100.9
										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



B-913 – Box 1
B-913 – Box 2



B-913 – Box 4
B-913 – Box 3