



MACTEC PROJECT NO.: 6468-06-1472				COUNTY Louisa, VA				GEOLOGIST S. Nicely						
SITE DESCRIPTION NORTH ANNA COL										GROUND WATER (ft)				
BORING NO. B-939		DRILL METHOD: Mud Rotary/Core				SAMPLE METHODS: SPT/CORE				0 HR.	17.8			
COLLAR ELEV. 254.0 ft (NAVD88)		NORTHING 3,911,318		US ft (NAD83)		EASTING 11,686,606		US ft (NAD83)		24 HR.	16.1			
TOTAL DEPTH 76.1 ft		DRILL MACHINE CME 55 Truck				DRILLER: H. Meyerson				HAMMER TYPE 140 lbs Auto				
DATE STARTED 9/20/06		COMPLETED 9/21/06				CORE BARREL TYPE: HQ 3 triple tube-wireline								
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION		
		0.5ft	0.5ft	0.5ft	0	20	40	60	80				100	
254.0					Ground Surface							254.0	0.0	
252.8	1.2	26	19	7						939-1		Silty, fine to coarse SAND (SM) yellowish brown (10YR 5/6), moist, medium dense (Fill)	250.5	3.5
250.2	3.8	4	6	9						939-2		Sandy CLAY (CL) yellowish brown (10YR 5/4), moist, stiff, silt (Fill)	248.0	6.0
247.7	6.3	6	6	9						939-3		Silty, fine to coarse SAND (SM) yellowish brown (10YR 5/6), dark brown (10YR 3/3), and dark yellowish brown (10YR 3/6), moist, medium dense, trace clay and gravel (Fill)		
245.2	8.8	4	3	7						939-4				
242.7	11.3	3	3	7						939-5				
240.2	13.8	4	7	8						939-6				
235.3	18.7	3	7	7						939-7				
230.2	23.8	7	11	9						939-8				
225.2	28.8	5	7	5						939-9				
220.2	33.8	3	3	5						939-10				
215.2	38.8	15	25	42						939-11				
210.2	43.8	27	48	50/0.3						939-12				
205.2	48.8	50/0.2								939-13				
202.8	51.2	50/0.1								939-14				
192.8	61.2	50/0.4								939-15				
187.9	66.1	50/0.4								939-16				
182.9	71.1	50/0.2								939-17				

NORTH ANNA COL. DATA REPORT REV0.GPJ. 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)					
BORING NO. B-939			DRILL METHOD: Mud Rotary/Core				SAMPLE METHODS: SPT/CORE			0 HR. 17.8					
COLLAR ELEV. 254.0 ft (NAVD88)			NORTHING 3,911,318		US ft (NAD83)		EASTING 11,686,606		US ft (NAD83)		24 HR. 16.1				
TOTAL DEPTH 76.1 ft			DRILL MACHINE CME 55 Truck				DRILLER: H. Meyerson			HAMMER TYPE 140 lbs Auto					
DATE STARTED 9/20/06				COMPLETED 9/21/06				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	
179.2					Continued from previous page										
													177.9	76.1	Boring and coring terminated at 76.1 ft in Weathered Rock: Severely weathered, medium hard, BIOTITE-QUARTZ GNEISS

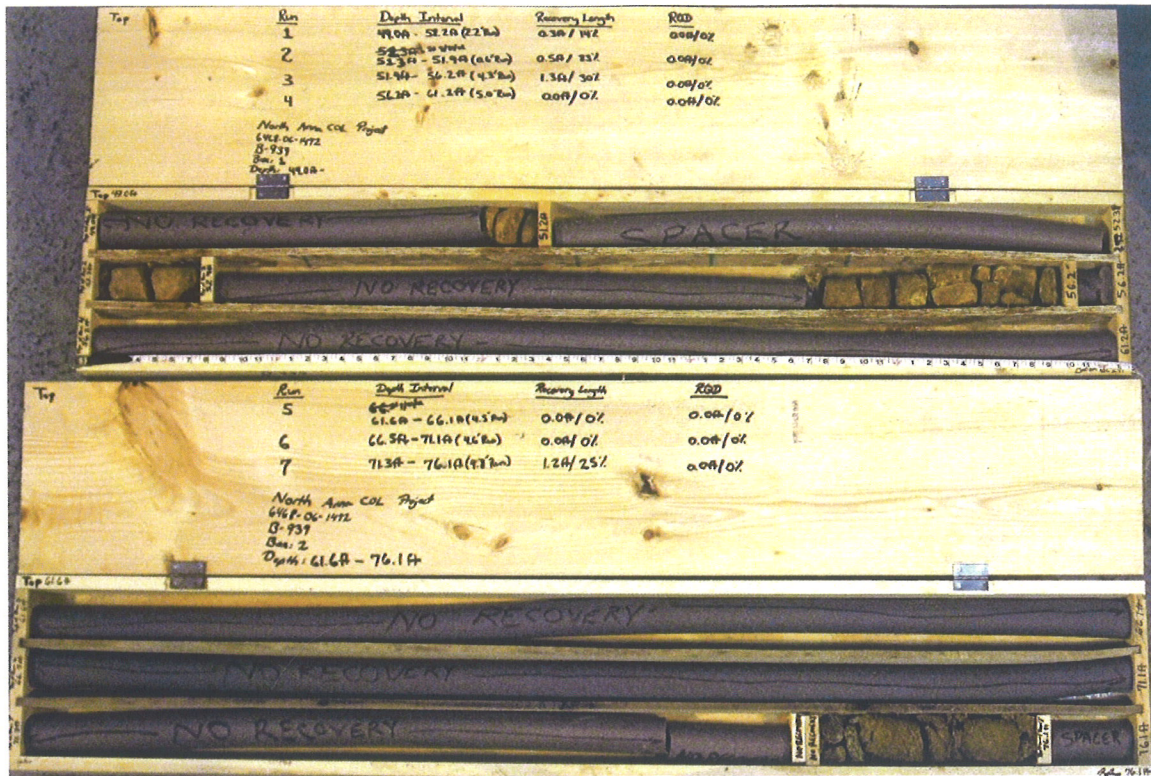
NORTH ANNA COL CORE NORTH ANNA COL DATA REPORT REV0 GP1 NORTH ANNA COL.GDT 1/19/07



MACTEC PROJECT NO.: 6468-06-1472				COUNTY Louisa, VA		GEOLOGIST S. Nicely	
SITE DESCRIPTION NORTH ANNA COL							GROUND WATER (ft)
BORING NO. B-939		DRILL METHOD: Mud Rotary/Core		SAMPLE METHODS: SPT/CORE			0 HR. 17.8
COLLAR ELEV. 254.0 ft (NAVD88)		NORTHING 3,911,318		US ft (NAD83)	EASTING 11,686,606	US ft (NAD83)	24 HR. 16.1
TOTAL DEPTH 76.1 ft		DRILL MACHINE CME 55 Truck		DRILLER: H. Meyerson		HAMMER TYPE 140 lbs Auto	
DATE STARTED 9/20/06			COMPLETED 9/21/06		CORE BARREL TYPE: HQ 3 triple tube-wireline		
CORE SIZE HQ3			TOTAL RUN 26.0 ft				

ELEV. (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN		SAMP. NO.	STRATA		LOG	DESCRIPTION AND REMARKS		
				REC. (ft) %	RQD (ft) %		REC. (ft) %	RQD (ft) %				
										Begin Coring @ 49.0 ft		
205.0	49.0	2.2	2:02	(0.3)	(0.0)	1				Weathered Rock: Yellowish brown (10YR 5/8&5/6), light brownish red and reddish brown, severely weathered, very close to close fracturing, soft to medium hard, BIOTITE-QUARTZ GNEISS (continued) -Highly fractured and weathered throughout run -Lense of Hard Rock: Light gray with reddish brown, moderately weathered, very close to close fracturing, hard, BIOTITE-QUARTZ GNEISS from 51.3-51.8 ft -Highly fractured and weathered throughout run with vertical fractures -No Recovery -No Recovery -No Recovery -Highly fractured and weathered throughout run		
202.8	51.2		2:30/1.2	14%	0%							
202.7	51.3	0.6	N=50/0.1	(0.5)	(0.0)	939-14						
202.1	51.9	4.3	17:13/0.6	83%	0%	2						
			3:17/1.3	(1.3)	(0.0)	3						
			5:43									
			4:31	30%	0%							
197.8	56.2		3:01									
		5.0	1:21	(0.0)	(0.0)	4						
			0:48	0%	0%							
			0:44									
192.8	61.2		0:56									
			0:52									
192.4	61.6	4.5	N=50/0.4	(0.0)	(0.0)	939-15						
			1:27	0%	0%	5						
			1:47									
187.9	66.1		1:56									
			2:26/1.5									
187.5	66.5	4.6	N=50/0.4	(0.0)	(0.0)	939-16						
			2:16	0%	0%	6						
			1:44									
182.9	71.1		0:49									
			2:31/1.6									
182.7	71.3	4.8	N=50/0.2	(1.2)	(0.0)	939-17						
			1:45	25%	0%	7						
			1:46									
			2:40									
177.9	76.1		2:27									
			3:00/0.8									
										177.9	Coring terminated at 76.1 ft in Weathered Rock: Severely weathered, medium hard, BIOTITE-QUARTZ GNEISS	76.1

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



B-939 – Box 1  
 B-939 – Box 2



MACTEC PROJECT NO.: 6468-06-1472				COUNTY Louisa, VA		GEOLOGIST S. Nicely	
SITE DESCRIPTION NORTH ANNA COL						GROUND WATER (ft)	
BORING NO. B-940		DRILL METHOD: Mud Rotary/Core		SAMPLE METHODS: SPT/CORE		0 HR. 15.9	
COLLAR ELEV. 268.3 ft (NAVD88)		NORTHING 3,910,267		EASTING 11,688,901		24 HR. ND	
TOTAL DEPTH 76.1 ft		DRILL MACHINE CME 55 Truck		DRILLER: H. Meyerson		HAMMER TYPE 140 lbs Auto	
DATE STARTED 11/2/06		COMPLETED 11/3/06		CORE BARREL TYPE: HQ 3 triple tube-wireline			

ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80			
268.3					Ground Surface							268.3 0.0
260.5	7.8											260.5 7.8
257.3	11.0	14	28	40						940-1		Silty, fine to coarse SAND (SM) olive brown (2.5Y 4/3) and light olive brown (2.5Y 5/4), dry to moist, dense and very dense (Residual Soil)
254.5	13.8	11	15	22						940-2		
249.8	18.5	15	19	30						940-3		
249.8	18.5	50/0.0										249.8 18.5
242.1	26.2	34	50	41						940-4		247.1 21.2
237.1	31.2	27	37	50/0.4						940-5		Hard Rock: dark gray, moderately weathered, very close to close fracturing, hard to soft, QUARTZ-BIOTITE GNEISS Weathered Rock: Dark brown and dark gray, severely weathered, very close to close fracturing, medium hard to very soft, QUARTZ-BIOTITE GNEISS
										940-6		
												234.7 33.6
												232.2 36.1
												228.2 40.1
												202.1 65.2
												Hard Rock: Dark brown to light gray, moderately severe to moderately weathered, very close to close fracturing, soft to medium hard, QUARTZ-BIOTITE GNEISS Weathered Rock: Dark gray, severely weathered, very close to close fracturing, very soft to medium hard, QUARTZ-BIOTITE GNEISS
												Hard Rock: Dark brown and dark to light gray, moderately severe to slightly weathered, very close to moderately close fracturing, soft to very hard, QUARTZ-BIOTITE GNEISS to 56.2 ft then BIOTITE-QUARTZ GNEISS
												Hard Rock: Light gray, very slightly weathered to fresh, very close to moderately close fracturing, hard to very hard, BIOTITE-QUARTZ GNEISS

NORTH ANNA COL BORE NORTH ANNA COL DATA REPORT REV0.GPJ 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)	
BORING NO. B-940			DRILL METHOD: Mud Rotary/Core				SAMPLE METHODS: SPT/CORE			0 HR. 15.9	
COLLAR ELEV. 268.3 ft (NAVD88)			NORTHING 3,910,267		US ft (NAD83)		EASTING 11,688,901		US ft (NAD83)		24 HR. ND
TOTAL DEPTH 76.1 ft			DRILL MACHINE CME 55 Truck				DRILLER: H. Meyerson			HAMMER TYPE 140 lbs Auto	
DATE STARTED 11/2/06				COMPLETED 11/3/06				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				
193.5					Continued from previous page								

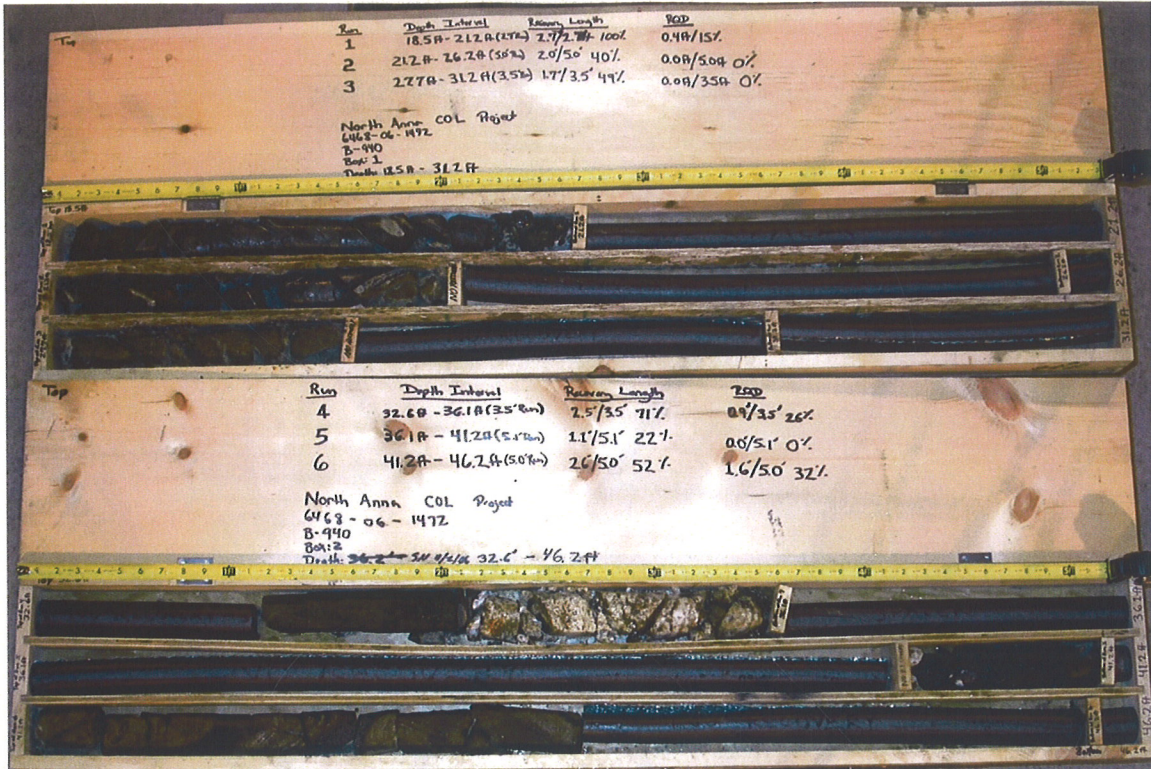
													192.2	76.1	Boring and coring terminated at 76.1 ft in Hard Rock: Hard to very hard, BIOTITE-QUARTZ GNEISS
--	--	--	--	--	--	--	--	--	--	--	--	--	-------	------	--

NORTH ANNA COL DATA REPORT REV0.GPJ 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)		
BORING NO. B-940			DRILL METHOD: Mud Rotary/Core			SAMPLE METHODS: SPT/CORE				0 HR. 15.9		
COLLAR ELEV. 268.3 ft (NAVD88)			NORTHING 3,910,267		US ft (NAD83)		EASTING 11,688,901		US ft (NAD83)		24 HR. ND	
TOTAL DEPTH 76.1 ft		DRILL MACHINE CME 55 Truck				DRILLER: H. Meyerson			HAMMER TYPE 140 lbs Auto			
DATE STARTED 11/2/06			COMPLETED 11/3/06			CORE BARREL TYPE: HQ 3 triple tube-wireline						
CORE SIZE HQ3			TOTAL RUN 54.7 ft									
ELEV. (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) % RQD (ft) %		SAMP. NO.	STRATA REC. (ft) % RQD (ft) %		LOG	DESCRIPTION AND REMARKS		
Begin Coring @ 18.5 ft												
249.8	18.5	2.7	N=50/0.0 3:24	(2.7)	(0.4)	1				249.8	Hard Rock: dark gray, moderately weathered, very close to close fracturing, hard to soft, QUARTZ-BIOTITE GNEISS	
247.1	21.2		6:27	100%	15%					247.1	-Highly fractured with Fe and Mn staining, quartz vein at 20.3 ft	
		5.0	3:15/0.7 3:10 2:59 1:37 1:13 1:23 N=91	(2.0)	(0.0)	2					Weathered Rock: Dark brown and dark gray, severely weathered, very close to close fracturing, medium hard to very soft, QUARTZ-BIOTITE GNEISS -No recovery 23.2-26.2 ft	
242.1	26.2											
						940-5						
240.6	27.7	3.5	4:18 1:50 1:34	(1.7)	(0.0)	3					-Highly fractured, no recovery from 27.7-31.2 ft	
237.1	31.2			49%	0%							
			0:42/0.5 N=50/0.4			940-6						
235.7	32.6	3.5	3:31 1:53 2:17/1.5	(2.5)	(0.9)	4				234.7	-Highly fractured quartz vein from 34.7-36.1 ft	
232.2	36.1			71%	26%					232.2	Hard Rock: Dark brown to light gray, moderately severe to moderately weathered, very close to close fracturing, soft to medium hard, QUARTZ-BIOTITE GNEISS	
		5.1	1:57 4:31 2:30 3:30 3:33/1.1	(1.1)	(0.0)	5				228.2	Weathered Rock: Dark gray, severely weathered, very close to close fracturing, very soft to medium hard, QUARTZ-BIOTITE GNEISS -Quartz vein from 36.1-36.2 ft, no recovery from 36.2-40.1 ft	
227.1	41.2			22%	0%						Hard Rock: Dark brown and dark to light gray, moderately severe to slightly weathered, very close to moderately close fracturing, soft to very hard, QUARTZ-BIOTITE GNEISS to 56.2 ft then BIOTITE-QUARTZ GNEISS -Highly fractured, no recovery from 43.8-46.2 ft	
		5.0	2:29 3:06 2:41 3:16 3:11	(2.6)	(1.6)	6						
222.1	46.2			52%	32%							
		5.0	3:24 3:09 1:59 2:44 1:51	(4.2)	(0.0)	7					-Highly fractured; quartz vein at 49.6 ft and from 48.6-49.4 ft	
217.1	51.2			84%	0%							
		5.0	1:23 1:48 2:11 2:02 2:29	(4.1)	(1.7)	8					-Highly fractured; quartz vein from 54.2-54.4 ft	
212.1	56.2			82%	34%							
		5.0	2:38 3:38 3:42 3:37 3:43	(4.8)	(4.1)	9					(5 joints at 60-65°)	
207.1	61.2			96%	82%							
		5.0	1:46 1:17 1:16 1:27 2:49	(2.7)	(1.9)	10					(2 joints at 10° with Fe staining; 1 joint at 50°; no recovery from 61.2-63.5 ft)	
202.1	66.2			54%	38%					202.1		
		4.9	2:34 3:42 3:38 4:17 3:58/0.9	(4.9)	(4.7)	11					Hard Rock: Light gray, very slightly weathered to fresh, very close to moderately close fracturing, hard to very hard, BIOTITE-QUARTZ GNEISS (2 joints at 40°; 1 joint at 70° with Fe staining and unknown radiating mineral)	
197.2	71.1			100%	96%							
		5.0	3:12 3:15 3:12 3:31 3:02	(5.0)	(4.2)	12					(1 joint at 45°, 1 joint at 75°)	
192.2	76.1			100%	84%					192.2	Coring terminated at 76.1 ft in Hard Rock: Hard to very hard, BIOTITE-QUARTZ GNEISS	

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



B-940 - Box 1  
B-940 - Box 2



B-940 - Box 3  
B-940 - Box 4





MACTEC PROJECT NO.: 6468-06-1472				COUNTY Louisa, VA			GEOLOGIST J. Lachewitz / J. Wallen		
SITE DESCRIPTION NORTH ANNA COL								GROUND WATER (ft)	
BORING NO. B-941		DRILL METHOD: Mud Rotary/Core			SAMPLE METHODS: SPT/CORE			0 HR. ND	
COLLAR ELEV. 267.2 ft (NAVD88)		NORTHING 3,910,404		US ft (NAD83)		EASTING 11,688,913		US ft (NAD83)	
TOTAL DEPTH 75.8 ft		DRILL MACHINE CME 550 ATV			DRILLER: G. Akins			HAMMER TYPE 140 lbs Auto	
DATE STARTED 11/1/06			COMPLETED 11/2/06			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	
267.2													Ground Surface	267.2	0.0
258.7	8.5													258.7	8.5
256.2	11.0	16	33	40							941-1		No samples due to utility clearance operations- soft dig/ vac. truck excavation		
252.8	14.4	17	42	50							941-2		Silty, fine to medium SAND (SM) light olive brown (2.5Y 5/4) and yellowish brown (10YR 5/6), moist, dense to very dense, relic rock fabric (Residual Soil)		
247.8	19.4	22	20	21							941-3				
242.8	24.4	33	32	50							941-4				
237.8	29.4	16	50/0.3								941-5		Weathered Rock: Very dark gray (10YR 3/1) to gray and yellowish brown (yellowish brown (10YR5/6), moist, very dense, severely weathered, very soft to medium hard, BIOTITE-QUARTZ GNEISS	230.0	
233.7	33.5	26	50/0.2								941-6				
226.1	41.1	50/0.2									941-7				
220.8	46.4	21	50/0.4								941-8				
		11	15	33							941-9				
														222.2	45.0
														217.7	49.5
														205.8	61.4

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



MACTEC PROJECT NO.: 6468-06-1472			COUNTY Louisa, VA			GEOLOGIST J. Lachewitz / J. Wallen		
SITE DESCRIPTION NORTH ANNA COL						GROUND WATER (ft)		
BORING NO. B-941		DRILL METHOD: Mud Rotary/Core		SAMPLE METHODS: SPT/CORE			0 HR. ND	
COLLAR ELEV. 267.2 ft (NAVD88)		NORTHING 3,910,404 US ft (NAD83)		EASTING 11,688,913 US ft (NAD83)		24 HR. 11.0		
TOTAL DEPTH 75.8 ft		DRILL MACHINE CME 550 ATV		DRILLER: G. Akins			HAMMER TYPE 140 lbs Auto	
DATE STARTED 11/1/06			COMPLETED 11/2/06		CORE BARREL TYPE: HQ 3 triple tube-wireline			

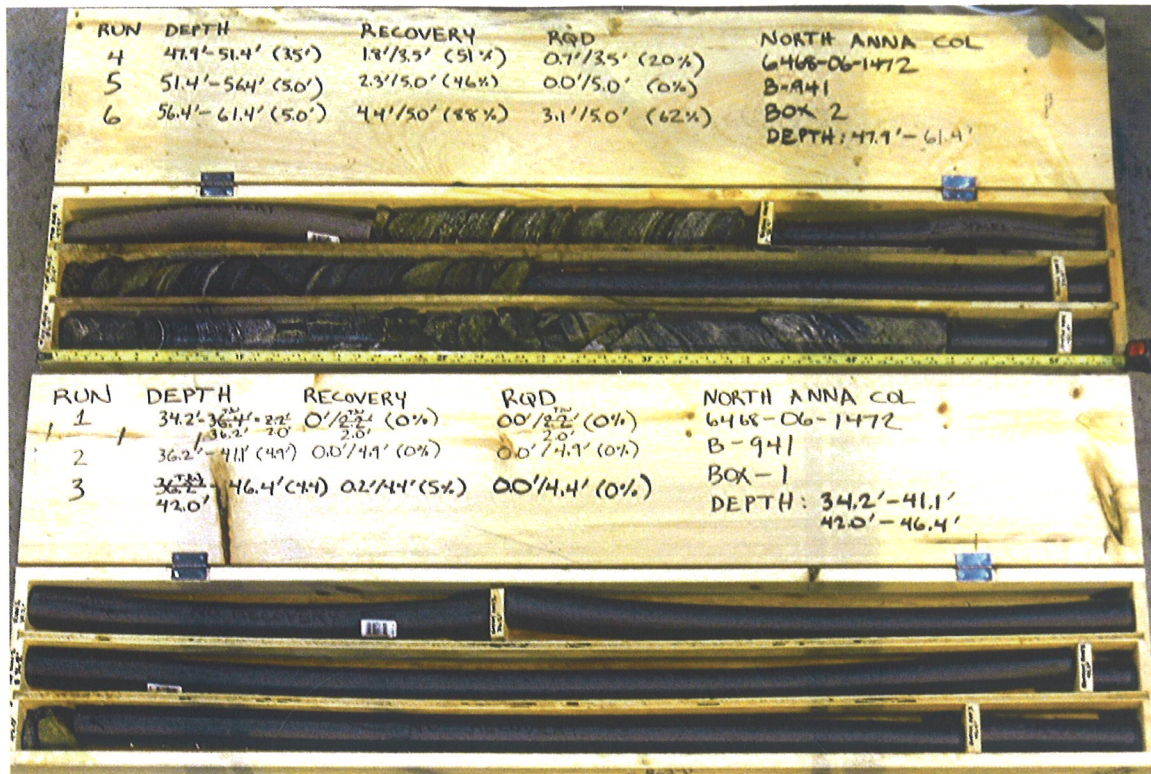
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT						SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION		
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100						
192.4															Continued from previous page	
															191.4	Boring and coring terminated at 75.8 ft in Hard Rock: Very hard, BIOTITE-QUARTZ GNEISS
															75.8	

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



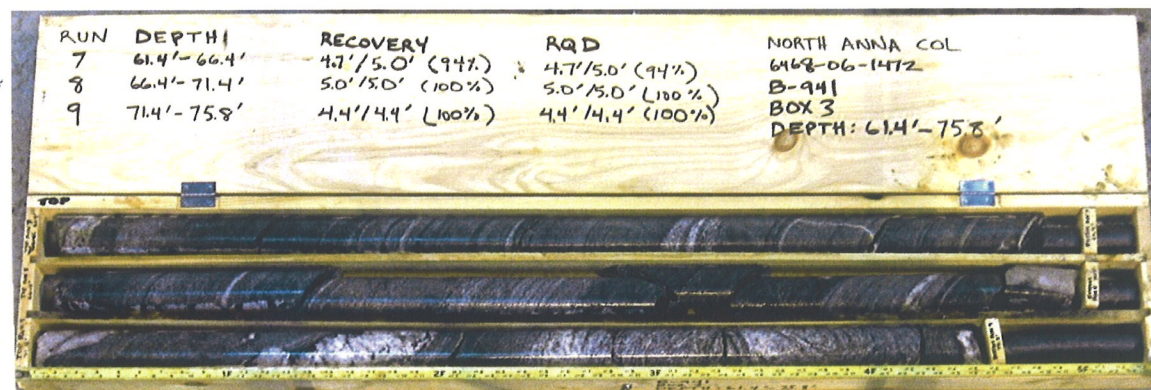
MACTEC PROJECT NO.: 6468-06-1472							COUNTY Louisa, VA			GEOLOGIST J. Lachewitz / J. Wallen		
SITE DESCRIPTION NORTH ANNA COL										GROUND WATER (ft)		
BORING NO. B-941		DRILL METHOD: Mud Rotary/Core				SAMPLE METHODS: SPT/CORE				0 HR. ND		
COLLAR ELEV. 267.2 ft (NAVD88)		NORTHING 3,910,404		US ft (NAD83)		EASTING 11,688,913		US ft (NAD83)		24 HR. 11.0		
TOTAL DEPTH 75.8 ft		DRILL MACHINE CME 550 ATV				DRILLER: G. Akins			HAMMER TYPE 140 lbs Auto			
DATE STARTED 11/1/06			COMPLETED 11/2/06			CORE BARREL TYPE: HQ 3 triple tube-wireline						
CORE SIZE HQ3			TOTAL RUN 39.2 ft									
ELEV. (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	REC. (%)	RQD (%)	SAMP. NO.	REC. (%)	RQD (%)	LOG	DESCRIPTION AND REMARKS		
										Begin Coring @ 34.2 ft		
233.0	34.2	2.0	1:08	(0.0)	(0.0)	1				Weathered Rock: Very dark gray (10YR 3/1) to gray and yellowish brown (yellowish brown (10YR5/6), moist, very dense, severely weathered, very soft to medium hard, BIOTITE-QUARTZ GNEISS (continued) -No Recovery -No Recovery		
231.0	36.2	4.9	1:19	0%	0%	2						
			0:56	(0.0)	(0.0)							
			1:05	0%	0%							
			1:16									
			1:32									
226.1	41.1		1:07/0.9									
			N=50/0.4			941-8						
225.2	42.0	4.4	2:43/1.1	(0.2)	(0.0)	3						
			2:37	5%	0%							
			2:42									
220.8	46.4		1:48/1.3									
			N=48			941-9						
219.3	47.9	3.5	2:16	(1.8)	(0.7)	4						
			1:40	51%	20%							
			1:32									
215.8	51.4		0:30/0.5	(2.3)	(0.0)	5						
		5.0	1:56	46%	0%							
			1:58									
			1:54									
210.8	56.4		2:52									
		5.0	2:00									
			2:16	(4.4)	(3.1)	6						
		5.0	2:23	88%	62%							
			3:40									
			3:02									
205.8	61.4		3:36									
		5.0	2:41	(4.7)	(4.7)	7						
			2:37	94%	94%							
			3:07									
			1:21									
200.8	66.4		1:34									
		5.0	2:14	(5.0)	(5.0)	8						
			1:14	100%	100%							
			1:42									
			1:46									
195.8	71.4		2:37									
		4.4	4:19	(4.4)	(4.4)	9						
			4:06	100%	100%							
			3:17									
			4:58									
191.4	75.8		3:08/0.4									
										Coring terminated at 75.8 ft in Hard Rock: Very hard, BIOTITE-QUARTZ GNEISS		

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



B-941 - Box 2

B-941 - Box 1



B-941 - Box 3



MACTEC PROJECT NO.: 6468-06-1472				COUNTY Louisa, VA				GEOLOGIST S. Nicely					
SITE DESCRIPTION NORTH ANNA COL										GROUND WATER (ft)			
BORING NO. B-942		DRILL METHOD: Mud Rotary/Core				SAMPLE METHODS: SPT/CORE				0 HR. 3.2			
COLLAR ELEV. 291.9 ft (NAVD88)		NORTHING 3,909,615		US ft (NAD83)		EASTING 11,684,326		US ft (NAD83)		24 HR. 3.8			
TOTAL DEPTH 100.8 ft		DRILL MACHINE CME 550 ATV				DRILLER: F. Cox (Knoxville 550)				HAMMER TYPE 140 lbs Auto			
DATE STARTED 10/16/06		COMPLETED 10/18/06				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				100
291.9					Ground Surface							291.9	0.0
291.9	0.0	5	3	5							942-1		Clayey SILT (MH) dark brown (7.5YR 3/4), moist, medium stiff, contains root fragments
288.9	3.0	10	13	13							942-2		(Residual Soil) Silty, fine to coarse SAND (SM) strong brown (7.5YR 4/6), moist, medium dense to very dense (Residual Soil)
283.8	8.1										942-3		
282.3	9.6	28	44	44							942-4		
279.9	12.0	36	50/0.5								942-5		
278.9	13.0	12	50/0.5								942-6		
273.4	18.5	39	50/0.2								942-7		Weathered Rock: Strong brown (7.5YR 4/6), dark yellowish brown (10YR 4/4), and very dark grayish brown (10YR 3/2), moist, very dense, severely weathered, QUARTZ-BIOTITE GNEISS
268.2	23.7	25	46	50/0.3							942-8		
264.1	27.8										942-9		
263.2	28.7	50/0.4									942-10		Hard Rock: Dark gray, slightly weathered, close fracturing, very hard, QUARTZ-BIOTITE GNEISS
		50/0.2											Hard Rock: Dark gray, fresh, wide to very wide fracturing, very hard, QUARTZ-BIOTITE GNEISS with trace pyrite

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



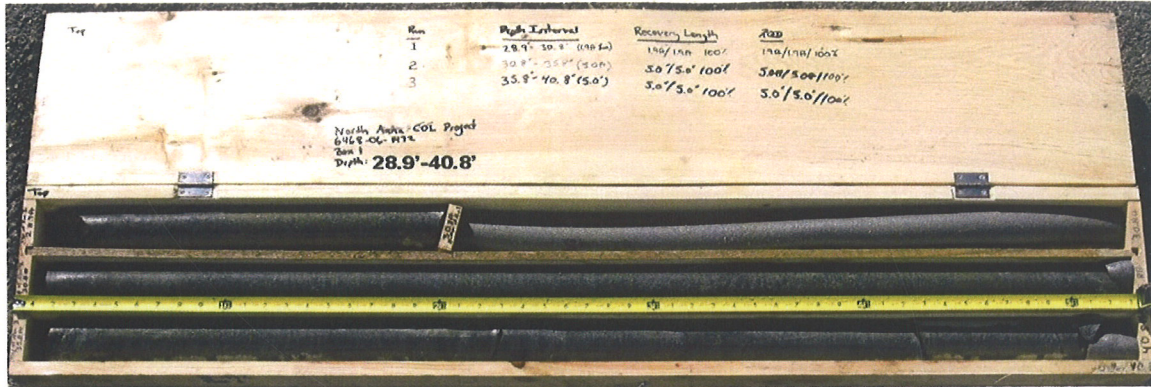
MACTEC PROJECT NO.: 6468-06-1472				COUNTY Louisa, VA				GEOLOGIST S. Nicely						
SITE DESCRIPTION NORTH ANNA COL										GROUND WATER (ft)				
BORING NO. B-942		DRILL METHOD: Mud Rotary/Core				SAMPLE METHODS: SPT/CORE				0 HR. 3.2				
COLLAR ELEV. 291.9 ft (NAVD88)		NORTHING 3,909,615		US ft (NAD83)		EASTING 11,684,326		US ft (NAD83)		24 HR. 3.8				
TOTAL DEPTH 100.8 ft		DRILL MACHINE CME 550 ATV				DRILLER: F. Cox (Knoxville 550)				HAMMER TYPE 140 lbs Auto				
DATE STARTED 10/16/06			COMPLETED 10/18/06			CORE BARREL TYPE: HQ 3 triple tube-wireline								
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION		
		0.5ft	0.5ft	0.5ft	0	20	40	60	80				100	
217.0					Continued from previous page									
												Hard Rock: Dark gray, fresh, wide to very wide fracturing, very hard, QUARTZ-BIOTITE GNEISS with trace pyrite (continued)		
												191.1		Boring and coring terminated at 100.8 ft in Hard Rock: Very hard, QUARTZ-BIOTITE GNEISS
													100.8	

NORTH ANNA COL DATA REPORT REV0.GPJ 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)		
BORING NO. B-942		DRILL METHOD: Mud Rotary/Core			SAMPLE METHODS: SPT/CORE			0 HR. 3.2		
COLLAR ELEV. 291.9 ft (NAVD88)		NORTHING 3,909,615		US ft (NAD83)		EASTING 11,684,326		US ft (NAD83)		
TOTAL DEPTH 100.8 ft		DRILL MACHINE CME 550 ATV			DRILLER: F. Cox (Knoxville 550)		HAMMER TYPE 140 lbs Auto			
DATE STARTED 10/16/06			COMPLETED 10/18/06			CORE BARREL TYPE: HQ 3 triple tube-wireline				
CORE SIZE HQ3			TOTAL RUN 71.9 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 @ 28.9 ft										
263.0	28.9	1.9	2:58	(1.9)	(1.9)	1				263.0 Hard Rock: Dark gray, slightly weathered, close fracturing, very hard, QUARTZ-BIOTITE GNEISS
261.1	30.8	5.0	7:11/0.9	100%	100%	2				261.1 Hard Rock: Dark gray, fresh, wide to very wide fracturing, very hard, QUARTZ-BIOTITE GNEISS with trace pyrite -No Joints
256.1	35.8	5.0	4:48 3:08 3:25 3:06 3:16	(5.0)	(5.0)	3				-No Joints
251.1	40.8	5.0	3:02 3:12 2:52 3:00 2:59	(5.0)	(5.0)	4				-No Joints
246.1	45.8	5.0	2:57 2:58 2:25 2:55 2:52	(5.0)	(5.0)	5				-No Joints
241.1	50.8	5.0	2:11 2:37 2:43 2:06 2:37	(5.0)	(5.0)	6				-No Joints
236.1	55.8	5.0	2:40 2:50 2:47 2:15 2:54	(5.0)	(5.0)	7				-No Joints
231.1	60.8	5.0	2:57 3:17 2:41 2:34 2:50	(5.0)	(5.0)	8				-No Joints
226.0	65.9	5.1	2:53 2:45 2:58 3:02 2:53/1.1	(5.1)	(5.1)	9				-No Joints
221.2	70.7	4.8	2:52 3:23 3:27 2:37 2:44/0.8	(4.8)	(4.8)	10				(1 joint at 25°)
216.2	75.7	5.0	3:28 2:59 3:29 2:58 3:26	(5.0)	(5.0)	11				-No Joints
211.2	80.7	5.0	2:39 2:53 2:42 2:40 2:53	(5.0)	(5.0)	12				-No Joints
206.1	85.8	5.1	2:26 2:29 2:27 2:46 2:50/1.1	(5.1)	(5.1)	13				(1 joint at 20°)
201.1	90.8	5.0	2:28 2:24 2:56 2:44 1:57	(5.0)	(5.0)	14				-No Joints
196.1	95.8	5.0	2:18 2:11 2:04 2:27 2:32	(5.0)	(5.0)	15				-No Joints
191.1	100.8	5.0	2:20 2:27 2:24 2:47 2:37	(5.0)	(5.0)					191.1 Coring terminated at 100.8 ft in Hard Rock: Very hard, QUARTZ-BIOTITE GNEISS
										100.8

NORTH ANNA COL CORE NORTH ANNA COL DATA REPORT REV.0.GPJ NORTH ANNA COL.GDT 1/19/07



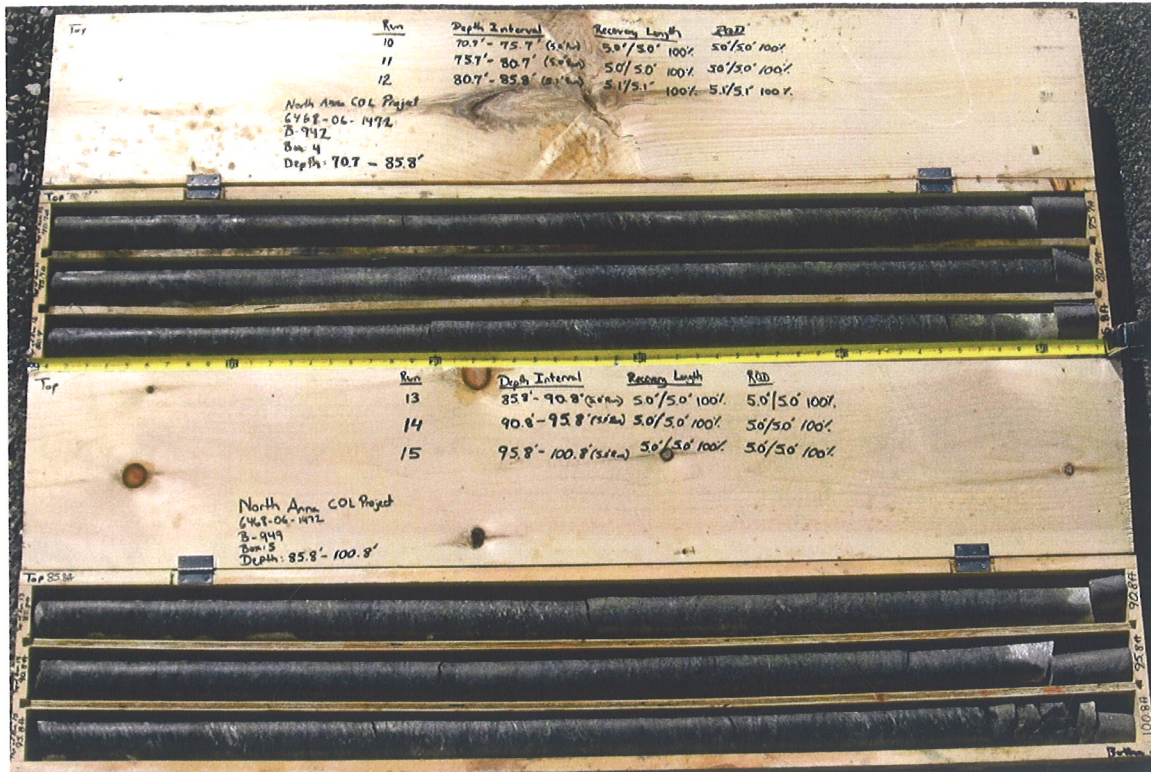
B-942 - Box 1



B-942 - Box 2

B-942 - Box 3





B-942 - Box 4  
B-942 - Box 5