



GEOTECHNICAL BORING LOG

Prepared By APK Date 6-12-08Checked By KAW Date 7-10-08

SHEET 1 OF 3

BECHTEL PROJECT NO.: 25352					COUNTY Victoria					GEOLOGIST M. Harvey						
SITE DESCRIPTION Exelon COL Project					MACTEC PROJECT NO.: 6468-07-1777					GROUND WATER (ft)						
BORING NO. B-2163		DRILL METHOD: Mud Rotary			SAMPLE METHODS: SPT					0 HR. ND						
GROUND SURFACE ELEV. 79.9 ft (NAVD88)		NORTHING 13,412,464			US ft (NAD83)		EASTING 2,599,862		US ft (NAD83)		24 HR. ND					
TOTAL DEPTH 150.0 ft		DRILL MACHINE CME-45			DRILLER: J. Warren/J. Alexander					HAMMER (ID) 140 lb. Auto (MEC 12)						
DATE STARTED 12/12/07		COMPLETED 12/13/07			CASING DEPTH: N/A					BITS USED: 2 15/16" Roller Cone						
ELEV.	DEPTH	BLOW COUNT			BLOWS PER FOOT					SAMP.	MOI	LOG	SOIL AND ROCK DESCRIPTION			
(ft)	(ft)	0.5ft	0.5ft	0.5ft	0	20	40	60	80	100	NO.					
79.9					Ground Surface								79.9	0.0		
79.9	0.0	4	6	10	●16					SS-1			FAT CLAY (CH), very dark gray (2.5Y3/1), very stiff, moist, few sand, trace organics, no HCl reaction			
76.4	3.5	5	6	6	●12					SS-2	3.5ft: stiff, trace carbonate nodules					
73.9	6.0	4	6	7	●13					SS-3	73.9 LEAN CLAY with sand (CL) light gray (5Y7/2), stiff, moist, some sand, trace black staining					
71.4	8.5	6	8	7	●15					SS-4	8.5ft: light gray (2.5Y7/2), trace black and yellow staining, weak HCl reaction					
68.9	11.0	5	7	9	●16					SS-5	11.0ft: light gray (5Y7/2), very stiff, trace black and brown staining, weak to no HCl reaction					
66.4	13.5	6	8	8	●16					SS-6	13.5ft: black and orange staining, no HCl reaction					
61.4	18.5	5	9	11	●20					SS-7	61.4 FAT CLAY (CH), light gray (5Y7/2), mottled brownish yellow (10YR6/6), very stiff, moist, some sand and gravel, trace gypsum, trace black staining, no HCl reaction					
56.4	23.5	4	6	7	●13					SS-8	23.5ft: yellow (10YR7/6), mottled light greenish gray (10Y8/1), stiff, few sand, trace black staining, weak HCl reaction					
52.4	27.5	5	10	9	●19					SS-9	28.5ft: brownish yellow (10YR6/6), mottled light gray (5Y7/2), very stiff, few sand, trace black staining, weak HCl reaction					
46.4	33.5	5	8	10	●18					SS-10	33.5ft: reddish yellow (7.5YR7/6), mottled light greenish gray (10Y8/1)					
41.4	38.5	5	10	13	●23					SS-11	42.9 POORLY GRADED SAND with clay (SP-SC), yellow (10YR7/8), mottled pale yellow (5Y8/2), very firm, wet, few fines, no HCl reaction					
36.4	43.5	9	11	14	●25					SS-12	36.4 POORLY GRADED SAND (SP), yellow (10YR7/8), mottled pale yellow (5Y8/2), very firm, wet, trace fines, no HCl reaction					
31.4	48.5	11	30	50/	80/1.0					SS-13	32.9 Clayey SAND with gravel (SC), pale yellow (5Y8/2), mottled yellow (2.5Y7/6), very dense, wet, little fines, little gravel, weak to strong HCl reaction					
26.4	53.5	7	11	14	●25					SS-14	29.4 POORLY GRADED SAND (SP), brownish yellow (10YR6/6), very firm, wet, trace fines, no HCl reaction					

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 2 OF 3

BECHTEL PROJECT NO.: 25352					COUNTY Victoria					GEOLOGIST M. Harvey																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 3 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST M. Harvey				
SITE DESCRIPTION Exelon COL Project				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)				
BORING NO. B-2163		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT				0 HR. ND		24 HR. ND		
GROUND SURFACE ELEV. 79.9 ft (NAVD88)		NORTHING 13,412,464		US ft (NAD83)		EASTING 2,599,862		US ft (NAD83)				
TOTAL DEPTH 150.0 ft		DRILL MACHINE CME-45		DRILLER: J. Warren/J. Alexander				HAMMER (ID) 140 lb. Auto (MEC 12)				
DATE STARTED 12/12/07		COMPLETED 12/13/07		CASING DEPTH: N/A				BITS USED: 2 15/16" Roller Cone				
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			
-32.4					Continued from previous page							
-38.7	118.5	6	8	13	●21					SS-25		FAT CLAY (CH), light greenish gray (10Y8/1), mottled brownish yellow (10YR7/6), very stiff, moist, few sand, trace black staining, weak HCl reaction (continued)
-48.7	128.5	8	17	13	●30					SS-26		118.5ft: light gray (5Y7/1), yellowish brown (10YR5/8) staining, trace carbonate nodules, no to weak HCl reaction
-58.7	138.5	16	15	18	●33					SS-27		127.0ft: possible sand layer from 127.0ft to 128.0ft, based on harder drilling 128.5ft: pale yellow (5Y8/2), mottled yellow (2.5Y7/6), weak HCl reaction
-68.7	148.5	12	22	25	●47					SS-28		138.5ft: light greenish gray (10Y8/1), mottled brownish yellow (10YR6/8), and very pale brown (10YR8/2), hard, little sand, no to weak HCl reaction
												POORLY GRADED SAND with clay (SP-SC), light gray (2.5Y7/1), dense, wet, few fines, no HCl reaction
												Boring Terminated at Elevation -70.2 ft

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



GEOTECHNICAL BORING LOG

Prepared By JPW Date 6-12-08Checked By KAW Date 7-10-08

SHEET 1 OF 3

BECHTEL PROJECT NO.: 25352					COUNTY Victoria					GEOLOGIST L. Bisson				
SITE DESCRIPTION Exelon COL Project (Victoria Site)					MACTEC PROJECT NO.: 6468-07-1777					GROUND WATER (ft)				
BORING NO. B-2164		DRILL METHOD: Mud Rotary			SAMPLE METHODS: SPT					0 HR. ND				
GROUND SURFACE ELEV. 80.4 ft (NAVD88)		NORTHING 13,412,538			US ft (NAD83)		EASTING 2,599,926		US ft (NAD83)		24 HR. ND			
TOTAL DEPTH 151.4 ft		DRILL MACHINE CME-550			DRILLER: L. Carter/D. Juhan					HAMMER (ID) 140 lb. Auto (MEC 03)				
DATE STARTED 11/17/07		COMPLETED 11/18/07			CASING DEPTH: N/A					BITS USED: 2 15/16" Drag Bit				
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				
80.4					Ground Surface								80.4	
80.4	0.0	9	9	9						SS-1			FAT CLAY with sand (CH), very dark gray (10YR3/1), very stiff, moist, little sand, no HCl reaction, trace manganese nodules, trace roots	
76.9	3.5	24	22	23						SS-2			3.5ft: greenish gray (N5/1), hard, few sand, trace carbonate nodules	
74.4	6.0	4	8	10						SS-3			6.0ft: gray (5Y5/1), very stiff, weak HCl reaction, trace shells	
71.9	8.5	9	9	13						SS-4			8.5ft: greenish gray (10Y6/1), strong HCl reaction	
69.4	11.0	11	15	16						SS-5			11.0ft: hard, trace black nodules	
66.9	13.5	9	9	13						SS-6			13.5ft: gray (2.5Y6/1), very stiff, trace black staining	
60.5	19.9	4	6	7						SS-7			19.9ft: light greenish gray (10Y7/1), stiff to very stiff, trace sand, weak HCl reaction	
55.5	24.9	5	5	8						SS-8			24.9ft: brownish yellow (10YR6/6), veined light greenish gray (10YR7/1), strong HCl reaction	
50.5	29.9	5	7	10						SS-9			29.9ft: strong brown (7.5YR5/6)	
45.5	34.9	4	6	8						SS-10			34.9ft: weak HCl reaction	
40.5	39.9	5	8	9						SS-11			39.9ft: yellowish brown (10YR5/6), mottled light greenish gray (10Y7/1)	
35.5	44.9	7	15	17						SS-12			42.5ft: Clayey SAND (SC), very pale brown (10YR7/4), dense, moist, some fines, strong HCl reaction, trace carbonate nodules	
30.5	49.9	9	15	17						SS-13			49.9ft: Sandy FAT CLAY (CH), light gray (10YR7/2), hard, moist, some sand, strong HCl reaction, trace carbonate nodules	
25.5	54.9	6	8	13						SS-14			54.9ft: light brownish gray (2.5Y6/2), very stiff, little	

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 2 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST L. Bisson					
SITE DESCRIPTION Exelon COL Project (Victoria Site)						MACTEC PROJECT NO.: 6468-07-1777						GROUND WATER (ft)	
BORING NO. B-2164		DRILL METHOD: Mud Rotary				SAMPLE METHODS: SPT				0 HR. ND			
GROUND SURFACE ELEV. 80.4 ft (NAVD88)		NORTHING 13,412,538		US ft (NAD83)		EASTING 2,599,926		US ft (NAD83)		24 HR. ND			
TOTAL DEPTH 151.4 ft		DRILL MACHINE CME-550				DRILLER: L. Carter/D. Juhan				HAMMER (ID) 140 lb. Auto (MEC 03)			
DATE STARTED 11/17/07		COMPLETED 11/18/07				CASING DEPTH: N/A				BITS USED: 2 15/16" Drag Bit			
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	MOI		
24.3					Continued from previous page								
20.5	59.9									SS-15		23.4 sand, no HCl reaction, trace orange staining POORLY GRADED SAND with clay (SP-SC), pale brown (10YR6/3), dense, wet, few fines, no HCl reaction 57.0	
		14	22	24									
15.5	64.9									SS-16		15.5 FAT CLAY (CH), light olive gray (5Y6/2), very stiff, moist, few sand, no HCl reaction, trace carbonate nodules 64.9	
		6	8	10									
10.5	69.9									SS-17		10.5 POORLY GRADED SAND with clay (SP-SC), pale brown (10YR6/3), dense to very firm, wet, few fines, no HCl reaction 69.9	
		9	15	18									
5.5	74.9									SS-18			
		6	10	14									
0.5	79.9									SS-19		2.4 FAT CLAY with gravel (CH), very pale brown (10YR8/2), and greenish gray (10YR6/1), to white (10YR8/1), hard, moist, little sand, little gravel, little to some carbonate pebbles and cobbles, angular to sub-angular 78.0	
		50/0.3											
-4.5	84.9									SS-20			
		12	18	24									
-9.5	89.9									SS-21A/B		-7.6 POORLY GRADED SAND with clay (SP-SC), light yellowish brown (2.5Y6/3), dense, wet, fine grained, few fines, no HCl reaction 88.0	
		13	20	19								-10.0 Clayey SAND (SC), light gray (5Y7/1), dense, moist, fine grained, some fines, strong HCl reaction, trace carbonate nodules 90.4	
-14.5	94.9									SS-22		-14.5 POORLY GRADED SAND with clay (SP-SC), light yellowish brown (2.5Y6/3), very dense, wet, fine grained, few fines, weak HCl reaction, trace carbonate nodules 94.9	
		21	38	50									
-19.5	99.9									SS-23		-19.5 POORLY GRADED SAND (SP), pale brown (10YR6/3), very dense, wet, trace fines, strong HCl reaction 99.9	
		38	43	40									
-29.5	109.9									SS-24		-29.5 POORLY GRADED SAND with clay (SP-SC), pale brown (10YR6/3), very dense, wet, fine grained, few fines, weak HCl reaction, trace carbonate nodules 109.9	
		23	29	34									

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 3 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST L. Bisson					
SITE DESCRIPTION Exelon COL Project (Victoria Site)				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)					
BORING NO. B-2164		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT				0 HR.		ND			
GROUND SURFACE ELEV. 80.4 ft (NAVD88)		NORTHING 13,412,538		US ft (NAD83)		EASTING 2,599,926		US ft (NAD83)		24 HR.			
TOTAL DEPTH 151.4 ft		DRILL MACHINE CME-550		DRILLER: L. Carter/D. Juhan				HAMMER (ID) 140 lb. Auto (MEC 03)					
DATE STARTED 11/17/07		COMPLETED 11/18/07		CASING DEPTH: N/A				BITS USED: 2 15/16" Drag Bit					
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			
-31.8					Continued from previous page								
-39.5	119.9	5	7	8							SS-25		POORLY GRADED SAND with clay (SP-SC), pale brown (10YR6/3), very dense, wet, fine grained, few fines, weak HCl reaction, trace carbonate nodules (continued) FAT CLAY (CH), light greenish gray (10Y7/1), stiff, moist, trace sand, no HCl reaction, trace manganese nodules and staining
-49.5	129.9	8	15	15							SS-26		129.9ft: mottled strong brown (7.5YR5/8), very stiff, some sand, weak HCl reaction, trace carbonate nodules
-59.5	139.9	12	15	20							SS-27		-59.5 POORLY GRADED SAND with clay (SP-SC), pale brown (10YR6/3), dense, wet, fine grained, few fines, no HCl reaction
-69.5	149.9	16	15	23							SS-28		-69.5 WELL-GRADED SAND with clay (SW-SC), pale brown (10YR6/3), dense, wet, fine to coarse grained, few fines, weak HCl reaction Boring Terminated at Elevation -71.0 ft

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



GEOTECHNICAL BORING LOG

Prepared By JPH Date 6-12-08Checked By KAW Date 7-10-08

SHEET 1 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST J. Jarvis					
SITE DESCRIPTION Exelon COL Project (Victoria Site)				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)					
BORING NO. B-2165		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND		24 HR. ND					
GROUND SURFACE ELEV. 80.1 ft (NAVD88)		NORTHING 13,412,661		US ft (NAD83)		EASTING 2,600,035		US ft (NAD83)					
TOTAL DEPTH 150.0 ft		DRILL MACHINE CME-45		DRILLER: D. Rhodes/K. Guy		HAMMER (ID) 140 lb. Auto (MEC 13)							
DATE STARTED 12/3/07		COMPLETED 12/4/04		CASING DEPTH: N/A		BITS USED: 2 15/16" Drag Bit							
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			
80.1					Ground Surface								80.1
80.1	0.0	3	3	4	●7					SS-1			FAT CLAY (CH), black (5YR2.5/1), firm, moist, few to little sand, no HCl reaction
76.6	3.5	3	3	6	●9					SS-2			3.5ft: stiff
74.1	6.0	2	4	7	●11					SS-3			6.0ft: dark greenish gray (10GY4/1), carbonate nodules
71.6	8.5	5	9	13	●22					SS-4			8.5ft: light brown (7.5YR6/3), very stiff, ferrous and black staining, strong HCl reaction
69.1	11.0	7	11	16	●27					SS-5			
66.6	13.5	4	8	9	●17					SS-6			
61.6	18.5	6	7	11	●18					SS-7			18.5ft: light gray (10YR7/2), mottled brownish yellow (10YR6/8), weak HCl reaction
56.6	23.5	4	5	8	●13					SS-8			23.5ft: stiff
51.5	28.6	5	5	7	●12					SS-9			28.5ft: brownish yellow (10YR6/8), mottled light gray (10YR7/2), strong to weak HCl reaction
46.6	33.5	6	8	10	●18					SS-10			33.5ft: very stiff
41.6	38.5	5	6	9	●15					SS-11			38.5ft: stiff
35.6	44.5	5	7	9	●16					SS-12			44.5ft: very stiff
31.6	48.5	10	23	30	●53					SS-13			48.5ft: light gray (10YR7/2), hard, mottled brownish yellow (10YR6/8), some sand, strong HCl reaction
26.6	53.5	16	19	24	●43					SS-14			28.1
													52.0
													Clayey SAND (SC), light gray (10YR7/2), dense, moist, coarse grained, carbonate nodules, strong HCl reaction

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 2 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST J. Jarvis					
SITE DESCRIPTION Exelon COL Project (Victoria Site)				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)					
BORING NO. B-2165		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT				0 HR.		ND			
GROUND SURFACE ELEV. 80.1 ft (NAVD88)		NORTHING 13,412,661		US ft (NAD83)		EASTING 2,600,035		US ft (NAD83)		24 HR. ND			
TOTAL DEPTH 150.0 ft		DRILL MACHINE CME-45		DRILLER: D. Rhodes/K. Guy				HAMMER (ID) 140 lb. Auto (MEC 13)					
DATE STARTED 12/3/07		COMPLETED 12/4/04		CASING DEPTH: N/A				BITS USED: 2 15/16" Drag Bit					
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	MOI		
24.0					Continued from previous page								
21.6	58.5	4	8	42							SS-15		Clayey SAND (SC), light gray (10YR7/2), dense, moist, coarse grained, carbonate nodules, strong HCl reaction (continued)
16.6	63.5	11	11	12							SS-16		FAT CLAY (CH), light gray (10YR7/2), mottled brownish yellow (10YR6/8), very stiff, moist, few to little sand, strong HCl reaction
11.6	68.5	9	17	15							SS-17		Clayey SAND (SC), pale brown (10YR6/3), dense, moist, coarse grained, some fines, carbonate nodules, ferrous staining, strong HCl reaction
6.6	73.5	23	18	22							SS-18		
1.4	78.7	9	11	14							SS-19		78.7ft: light gray (10YR7/2), very firm, weak HCl reaction
-3.5	83.6	7	10	11							SS-20		POORLY GRADED SAND with clay (SP-SC), light gray (10YR7/2), mottled brownish yellow (10YR6/8), very firm, moist, coarse grained, few fines, no HCl reaction
-8.4	88.5	12	21	50/0.4							SS-21		POORLY GRADED SAND (SP), pale brown (10YR6/3), very dense, moist, coarse grained, trace clay, no HCl reaction, carbonate layer at 89.8ft
-13.4	93.5	11	14	21							SS-22		FAT CLAY (CH), light gray (10YR7/2), mottled brownish yellow (10YR6/8), hard, moist, few to little sand, interbedded carbonate layers, strong HCl reaction
-18.4	98.5	19	36	50/0.4							SS-23		POORLY GRADED SAND (SP), pale brown (10YR6/3), very dense, wet, coarse grained, few fines, carbonate deposit 98.9ft to 99.4ft, strong HCl reaction
-28.4	108.5	21	12	13							SS-24		FAT CLAY (CH), light gray (10YR7/2), mottled brownish yellow (10YR6/8), very stiff, moist, few sand, strong HCl reaction

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 3 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST J. Jarvis				
SITE DESCRIPTION Exelon COL Project (Victoria Site)				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)				
BORING NO. B-2165		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT				0 HR. ND		24 HR. ND		
GROUND SURFACE ELEV. 80.1 ft (NAVD88)		NORTHING 13,412,661		US ft (NAD83)		EASTING 2,600,035		US ft (NAD83)				
TOTAL DEPTH 150.0 ft		DRILL MACHINE CME-45		DRILLER: D. Rhodes/K. Guy				HAMMER (ID) 140 lb. Auto (MEC 13)				
DATE STARTED 12/3/07		COMPLETED 12/4/04		CASING DEPTH: N/A				BITS USED: 2 15/16" Drag Bit				
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			
-32.1					Continued from previous page							
-38.5	118.6	8	11	13						SS-25A/B		POORLY GRADED SAND (SP), pale brown (10YR6/3), very firm, wet, coarse grained, trace fines, no HCl reaction (continued)
-48.4	128.5	25	38	47						SS-26A/B		FAT CLAY (CH), gray (10YR6/1), very stiff, moist, few sand, black staining, carbonate nodules, no HCl reaction
-58.4	138.5	42	37	50/0.5						SS-27		POORLY GRADED SAND (SP), pale brown (10YR6/3), very dense, wet, coarse grained, trace fines, strong HCl reaction
-68.4	148.5	33	28	27						SS-28		148.5ft: pinkish gray (7.5YR6/2)
												Boring Terminated at Elevation -69.9 ft

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



GEOTECHNICAL BORING LOG

Prepared By JFH Date 6-12-08Checked By KAW Date 7-10-08

SHEET 1 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST C. Gandy						
SITE DESCRIPTION Exelon COL Project (Victoria Site)				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)						
BORING NO. B-2166		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND		24 HR. ND						
GROUND SURFACE ELEV. 80.5 ft (NAVD88)		NORTHING 13,412,109		US ft (NAD83)		EASTING 2,599,713		US ft (NAD83)						
TOTAL DEPTH 150.0 ft		DRILL MACHINE CME-55 LC		DRILLER: D. White/O. Smith		HAMMER (ID) 140 lb. Auto (MEC 02)								
DATE STARTED 11/13/07		COMPLETED 11/14/07		CASING DEPTH: N/A		BITS USED: 2 7/8" Wing Bit								
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				
80.5					Ground Surface							80.5	0.0	
80.5	0.0	4	4	4	● 8					SS-1		FAT CLAY (CH), dark gray (7.5YR4/1), firm, moist, few sand, no HCl reaction, roots		
77.0	3.5	2	3	4	● 7					SS-2		3.5 ft: gray (10YR6/1), weak HCl reaction, organics, thinly laminated, carbonate nodules		
74.5	6.0	5	5	6	● 11					SS-3		LEAN CLAY with sand (CL), very pale brown (10YR7/3), stiff, moist, little sand, strong HCl reaction, carbonate nodules, organics	6.0	
72.0	8.5	7	9	10	● 19					SS-4		8.5 ft: light gray (10YR7/2), mottled brownish yellow (10YR6/8), very stiff, no HCl reaction		
69.5	11.0	5	7	7	● 14					SS-5		11.0ft: very pale brown (10YR7/3), trace mottling, stiff, few sand, strong HCl reaction		
67.0	13.5	6	8	10	● 18					SS-6		13.5ft: very pale brown (10YR8/2), very stiff, no HCl reaction		
62.0	18.5	5	6	7	● 13					SS-7		FAT CLAY (CH), very pale brown (10YR8/2), mottled brownish yellow (10YR6/6), stiff, moist, few sand, weak HCl reaction, carbonate nodules, organics	18.5	
57.0	23.5	4	4	7	● 11					SS-8		23.5ft: yellow (10YR7/6), mottled light greenish gray (10Y8/1), strong HCl reaction, thinly laminated		
52.0	28.5	4	5	7	● 12					SS-9				
47.0	33.5	5	5	8	● 13					SS-10		33.5ft: brownish yellow (10YR6/6), mottled light greenish gray (10Y8/1)		
42.0	38.5	4	4	8	● 12					SS-11		38.5ft: yellow (10YR7/8), mottled light greenish gray (10YR8/1)		
37.0	43.5	5	4	8	● 12					SS-12		43.5ft: weak HCl reaction		
32.0	48.5	5	6	9	● 15					SS-13		48.5ft: trace ferrous nodules, trace rounded gravel		
27.0	53.5	6	7	11	● 18					SS-14			53.5	

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 2 OF 3

BECHTEL PROJECT NO.: 25352					COUNTY Victoria					GEOLOGIST C. Gandy						
SITE DESCRIPTION Exelon COL Project (Victoria Site)										MACTEC PROJECT NO.: 6468-07-1777					GROUND WATER (ft)	
BORING NO. B-2166			DRILL METHOD: Mud Rotary					SAMPLE METHODS: SPT					0 HR. ND			
GROUND SURFACE ELEV. 80.5 ft (NAVD88)			NORTHING 13,412,109		US ft (NAD83)		EASTING 2,599,713		US ft (NAD83)		24 HR. ND					
TOTAL DEPTH 150.0 ft			DRILL MACHINE CME-55 LC					DRILLER: D. White/O. Smith			HAMMER (ID) 140 lb. Auto (MEC 02)					
DATE STARTED 11/13/07			COMPLETED 11/14/07			CASING DEPTH: N/A					BITS USED: 2 7/8" Wing Bit					
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.	MOI		
24.4					Continued from previous page											
22.0	58.5										SS-15		FAT CLAY with sand (CH), very pale brown (10YR7/3), mottled brownish yellow (10YR6/6), very stiff, moist, little sand, strong HCl reaction, carbonate nodules, trace organics (continued) 58.5ft: few sand			
		6	7	10		17										
17.0	63.5										SS-16		63.5ft: light brownish gray (2.5Y6/2), mottled brownish yellow (10YR6/6), little sand, weak HCl reaction			
		5	8	11		19										
12.0	68.5										SS-17		12.0 Silty SAND (SM), very pale brown (10YR7/3), very firm, moist, little fines, strong HCl reaction			
		10	12	15		27										
7.0	73.5										SS-18		73.5ft: very dense			
		39	27	24		51										
2.0	78.5										SS-19		78.5ft: firm, some fines, no HCl reaction			
		5	7	12		19										
-3.0	83.5										SS-20		-3.0 FAT CLAY (CH), yellow (10YR7/8), mottled very pale brown (10YR7/3), very stiff, moist, few sand, weak HCl reaction, carbonate nodules			
		14	7	12		19										
-8.0	88.5										SS-21		-8.0 LEAN CLAY with sand (CL), very pale brown (10YR8/3), hard, moist, some sand, strong HCl reaction, carbonate nodules			
		19	50/0.2			69/0.7										
-13.0	93.5										SS-22		-13.0 POORLY GRADED SAND (SP), very pale brown (10YR8/3), very dense, wet, fine grained, trace fines, no HCl reaction, interbedded layers of cemented carbonate sand			
		24	27	36		63										
-18.0	98.5										SS-23		-18.0 POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR7/4), very dense, moist, fine to medium grained, few fines, strong HCl reaction			
		50/0.4				50/0.4										
-28.0	108.5										SS-24		-28.0 FAT CLAY with sand (CH), very pale brown (10YR7/4), mottled brownish yellow (10YR6/6), very stiff, moist, little sand, strong HCl reaction, carbonate nodules			
		6	7	11		18										

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 3 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST C. Gandy							
SITE DESCRIPTION Exelon COL Project (Victoria Site)				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)							
BORING NO. B-2166		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT				0 HR. ND		24 HR. ND					
GROUND SURFACE ELEV. 80.5 ft (NAVD88)		NORTHING 13,412,109		US ft (NAD83)		EASTING 2,599,713		US ft (NAD83)							
TOTAL DEPTH 150.0 ft		DRILL MACHINE CME-55 LC		DRILLER: D. White/O. Smith				HAMMER (ID) 140 lb. Auto (MEC 02)							
DATE STARTED 11/13/07		COMPLETED 11/14/07		CASING DEPTH: N/A				BITS USED: 2 7/8" Wing Bit							
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					
-31.7					Continued from previous page										
-38.0	118.5	6	7	10	●17						SS-25			FAT CLAY with sand (CH), very pale brown (10YR7/4), mottled brownish yellow (10YR6/6), very stiff, moist, little sand, strong HCl reaction, carbonate nodules (continued)	
-48.0	128.5	15	18	24	●42						SS-26			POORLY GRADED SAND (SP), white (10YR8/1), dense, wet, trace fines, no HCl reaction	
-58.0	138.5	17	16	24	●40						SS-27			POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR7/4), to pale yellow (2.5Y8/2), dense, wet, few fines, no HCl reaction	
-68.0	148.5	7	10	12	●22						SS-28			FAT CLAY with sand (CH), light gray (10YR7/2), very stiff, moist, little fine grained sand, weak HCl reaction, carbonate nodules, trace iron nodules	
-69.5	150.0													Boring Terminated at Elevation -69.5 ft	

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



GEOTECHNICAL BORING LOG

Prepared By DM Date 6-12-08Checked By KAW Date 7-10-08

SHEET 1 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST C. Gandy				
SITE DESCRIPTION Exelon COL Project (Victoria Site)				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)				
BORING NO. B-2167		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT				0 HR.		ND		
GROUND SURFACE ELEV. 80.2 ft (NAVD88)		NORTHING 13,412,192		US ft (NAD83)		EASTING 2,599,781		US ft (NAD83)		24 HR. ND		
TOTAL DEPTH 150.0 ft		DRILL MACHINE CME-55 LC		DRILLER: D. White/O. Smith				HAMMER (ID) 140 lb. Auto (MEC 02)				
DATE STARTED 11/14/07		COMPLETED 11/15/07		CASING DEPTH: N/A				BITS USED: 2 7/8" Wing Bit				
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		
80.2					Ground Surface							
80.2	0.0	3	3	4						SS-1		FAT CLAY (CH), dark gray (10YR4/1), firm, moist, few sand, no HCl reaction, roots
76.7	3.5	4	5	8						SS-2		3.5ft: gray (10Y5/1), stiff, moist, little sand, weak HCl reaction, carbonate nodules, thinly laminated
74.2	6.0	6	6	8						SS-3		74.2
71.7	8.5	7	7	9						SS-4		LEAN CLAY with sand (CL), very pale brown (10YR7/3), stiff, moist, little sand, strong HCl reaction, carbonate nodules, trace mottling, organics
69.2	11.0	7	8	9						SS-5		8.5ft: very pale brown (10YR8/3), very stiff
66.7	13.5	7	7	10						SS-6		13.5ft: very pale brown (10YR7/3), few sand, no HCl reaction, ferrous staining
61.7	18.5	5	5	6						SS-7		61.7
56.7	23.5	6	7	7						SS-8		FAT CLAY (CH), yellow (10YR7/8), mottled with very pale brown (10YR8/3), stiff, moist, few sand, strong HCl reaction, carbonate nodules, organics, ferrous staining
51.7	28.5	5	5	8						SS-9		23.5ft: very pale brown (10YR8/3), little sand, weak HCl reaction
46.7	33.5	7	7	10						SS-10		28.5ft: yellow (10YR7/8), mottled with brownish yellow (10YR6/6), few sand, strong HCl reaction
41.7	38.5	4	5	7						SS-11		33.5ft: very stiff, thinly laminated, trace organics
36.7	43.5	5	5	9						SS-12		38.5ft: stiff, organics, ferrous staining
31.7	48.5	6	12	19						SS-13		43.5ft: little sand, weak HCl reaction, trace mottling, trace organics
26.7	53.5	12	17	18						SS-14		31.7
												FAT CLAY with sand (CH), very pale brown (10YR7/4), hard, moist, little sand, weak HCl reaction, carbonate nodules, ferrous staining, trace organics
												26.7
												Clayey SAND (SC), very pale brown (10YR8/2), dense to very firm, moist, little sand, no HCl reaction, ferrous staining

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08

BECHTEL PROJECT NO.: 25352				COUNTY Victoria		GEOLOGIST C. Gandy									
SITE DESCRIPTION Exelon COL Project (Victoria Site)				MACTEC PROJECT NO.: 6468-07-1777											
BORING NO. B-2167		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		GROUND WATER (ft)									
GROUND SURFACE ELEV. 80.2 ft (NAVD88)		NORTHING 13,412,192 US ft (NAD83)		EASTING 2,599,781 US ft (NAD83)		0 HR. ND									
TOTAL DEPTH 150.0 ft		DRILL MACHINE CME-55 LC		DRILLER: D. White/O. Smith		24 HR. ND									
DATE STARTED 11/14/07		COMPLETED 11/15/07		CASING DEPTH: N/A		BITS USED: 2 7/8" Wing Bit									
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					
24.1					Continued from previous page										
21.7	58.5	9	15	11							SS-15		Clayey SAND (SC), very pale brown (10YR8/2), dense to very firm, moist, little sand, no HCl reaction, ferrous staining (continued)		
16.7	63.5	5	7	10							SS-16		FAT CLAY with sand (CH), very pale brown (10YR7/3), very stiff, moist, little sand, weak HCl reaction, trace carbonate nodules, ferrous staining		
11.7	68.5	7	10	14							SS-17		Silty SAND (SM), very pale brown (10YR8/3), very firm, moist to wet, little fines, no HCl reaction, carbonate nodules		
6.7	73.5	14	18	19							SS-18		73.5ft: dense, strong HCl reaction		
1.7	78.5	5	5	8							SS-19		FAT CLAY with sand (CH), very pale brown (10YR8/3), stiff, moist, little sand, strong HCl reaction, carbonate nodules		
-3.3	83.5	19	18	8							SS-20		83.5ft: very stiff, moist, some sand, little to some gravel sized carbonate nodules 84.5ft: brownish yellow (10YR6/8), mottled with very pale brown (10YR8/3), few sand, trace carbonate nodules, trace organics		
-8.3	88.5	23	28	28							SS-21		88.5ft: very pale brown (10YR8/2), trace mottling, hard, little to some carbonate nodules		
-13.3	93.5	11	16	23							SS-22		Clayey SAND (SC), very pale brown (10YR8/2), dense, little fines, no HCl reaction, trace carbonate nodules		
-18.3	98.5	43	50/0.4								SS-23		POORLY GRADED SAND (SP), very pale brown (10YR6/6), very dense, wet, trace fines, strong HCl reaction		
-28.3	108.5	6	7	8							SS-24		FAT CLAY (CH), very pale brown (10YR7/4), to brownish yellow (10YR6/6), stiff, moist, few sand, weak HCl reaction, carbonate nodules, organics		

EXELON COL BORE EXELON~2.GPJ EXELON COL.GDT 6/12/08