

PROJECT NAME: KLEIN TOOLS DIRECT PUSH BORING SB1

PROJECT LOCATION: JONESVILLE, MICHIGAN

BY: CES/BST START: 12/1/10

CLIENT: PROJECT NUMBER: LE61837A SHEET: 1

DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION GROUND SURFACE	SAMPLE TYPE/NUMBER INTERVAL	INCHES OF RECOVERY	BLOWS PER SIX INCHES	PID READINGS	ANALYTICAL SAMPLE	STANDARD PENETRATION TEST RESISTANCES (N-values)
0	S	ELEVATION= Gravelly Fine Sand- Some Silt- Brown- Moist (SP/Fill)	& Z LS1	<u>¥</u> 16	S PE	₹ <1	AN	0 10 20 30 40 50
- 2	XX	Silty Fine Sand-Trace Organics, Cinders and Slag- Dark Brown- Moist (SM/Fill)	201					
		Silty Fine Sand- Dark Brown- Moist (SM)	LS2	16		<1	П	
5 -		Gravelly Fine to Coarse Sand- Some Silt- Brown- Moist to Wet (SW)	LS3	15		<1		
¥			LS4	15		<1		
3		END OF BORING AT 8 FEET.	***				$\ $	
10 -								
(#)								
1 2								
15 -							-	
20 -							-	
-								
25 -							ŀ	
1								
30 -							-	
35		TATED LEVEL ORDERVATIONS						
¥ GR ₩ GR	OUNDWA	ATER LEVEL OBSERVATIONS ITER ENCOUNTERED DURING DRILLING STER ENCOUNTERED UPON COMPLETION STER ENCO	BSERVE	D.				
	PULLLING	5 THE BURING WAS BACKFILLED WITH ST	JIL 6011	INGS	VIAN R	_IN I UN	115	ынго
NDII I ED		DRILL METHOD, DIRECT DUSH		_	-	D I EV	_	

DRILLER: BM

DRILL METHOD: DIRECT PUSH

RIG NO.: ATV BACKFILL METHOD: NOTE 3

WATER LEVEL DURING DRILLING: 7.75



PROJECT NAME:

KLEIN TOOLS

DIRECT PUSH BORING SB2

PROJECT LOCATION: JONESVILLE, MICHIGAN

BY: CES/BST START: 12/1/10

END: 12/1/10

IENT: CITY OF JONESVILLE PROJECT NUMBER: LE61837A SHEET: 1

								TOOTA OHLLI,
DEPTH (PEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION GROUND SURFACE ELEVATION=	SAMPLE TYPE/NUMBER INTERVAL	INCHES OF RECOVERY	BLOWS PER SIX INCHES	PID READINGS	ANALYTICAL SAMPLE	STANDARD PENETRATION TEST RESISTANCES (N-values) 0 10 20 30 40 56
0	\otimes		LS1	20	W 07	<1	M	0 10 20 30 40 50
	\bigotimes		LS2	20		<1	Λ	
5 -	\bowtie		LS3	12		<1		
3	\bowtie	Silty Fine Sand- Some Brick, Cinders and Slag- Dark Brown- Moist (SM/Fill)	LS4	12		<1		
10 -	\bowtie		LS5	14		<1	2	
Δ	\otimes		LS6	14		<1		
	\otimes		LS7	14		<1		
¥15 −		Amorphic Peat- Some Wood Pieces- Black- Wet (Pt)	LS8	14		<1	-	
		Silty Fine to Coarse Gravel- Trace Sand- Dark Gray- Wet (GM)	LS9 LS10	8		<1		
20 -	144	END OF BORING AT 20 FEET.	-				-	
25 -								
30-								
₩ GR	AWDINDO	ATER LEVEL OBSERVATIONS TER ENCOUNTERED UPON COMPLETION THE INDICATED STRATIFICATION LINES BE GRADUAL TO NOTE: 1. THE INDICATED STRATIFICATION LINES BE GRADUAL TO NOTE: 2. NO ODORS NOTED AND NO STAINING OF	BSERVE CTED FR ELOW G	D. ROM A	TEMP(DRARY I	MON	NITORING WELL, THE WELL SCREEN WAS
	DM	DIDEOT DUDU					_	

DRILLER: BM RIG NO.: ATV DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: NOTE 4

WATER LEVEL DURING DRILLING: 15



PROJECT NAME:

KLEIN TOOLS

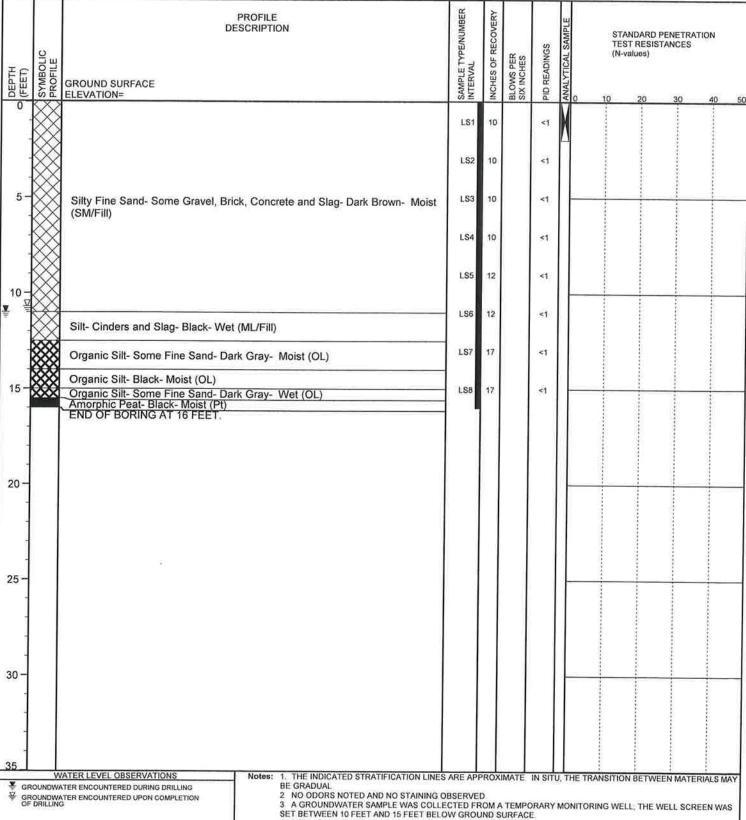
DIRECT PUSH BORING SB3

PROJECT LOCATION: JONESVILLE, MICHIGAN

BY: CES/BST START: 12/1/10

END: 12/1/10

CLIENT: CITY OF JONESVILLE PROJECT NUMBER: LE61837A SHEET: 1



4 BORING WAS BACKFILLED WITH SOIL CUTTINGS AND BENTONITE CHIPS

DRILLER: BM RIG NO .: ATV

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: NOTE 4

WATER LEVEL DURING DRILLING: 11



PROJECT NAME:

KLEIN TOOLS

DIRECT PUSH BORING SB4

PROJECT LOCATION: JONESVILLE, MICHIGAN

BY: CES/BST START: 12/1/10

END: 12/1/10

CLIEN		CITY OF JONESVILLE		ROJE							HEET:			
DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION GROUND SURFACE		SAMPLE TYPE/NUMBER INTERVAL	INCHES OF RECOVERY	BLOWS PER SIX INCHES		ANALYTICAL SAMPLE		STANDA	RD PENE	TRATIO	NC	
0	(S) IL	ELEVATION= Silty Fine Sand- Trace Gravel- Dark Brown- Moist (SM/Fill)				필앙		AN	0 1	0 20	3	0	40	50
₹ 5-		Silty Fine Sand- Some Slag and Cinders- Dark Brown to Black- Moist (SM/ Silty Fine Sand- Brown- Moist (SM) Silty Fine to Coarse Sand- Some Gravel- Yellowish Brown- Moist to Wet (S		LS2 LS3	15	Ž	<1 <1 <1 <1 <1							
10-		END OF BORING AT 8 FEET.												
15 —								-						
20 -														
25 –														
30 -														
35 ▼ GF ∇ GF OF	ROUNDW	ATER LEVEL OBSERVATIONS ATER ENCOUNTERED DURING DRILLING ATER ENCOUNTERED UPON COMPLETION 3 THE BORING WAS BACKFILLED WI	NG C	BSERVE	D.					SITION BE	TWEEN	MATERI	ALS M	ĀΥ

DRILLER: BM RIG NO.: ATV DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: NOTE 3

WATER LEVEL DURING DRILLING: 5



PROJECT NAME:

KLEIN TOOLS

DIRECT PUSH BORING SB5

PROJECT LOCATION: JONESVILLE, MICHIGAN

BY: CES/BST START: 12/1/10

END: 12/1/10

CLIENT: CITY OF JONESVILLE PROJECT NUMBER: LE61837A SHEET: 1

		OTT OF CONECUEE		INCOL						O.		• '	
DЕРТН (FEET)		GROUND SURFACE	PROFILE SSCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	INCHES OF RECOVERY	BLOWS PER SIX INCHES	PID READINGS	ANALYTICAL SAMPLE		STANDAR TEST RES (N-values)	SISTANG		DN
0	SP	ELEVATION= 6 Inches Cement Concrete Silty Fine Sand- Brown- Moist (SM Clayey Fine Sand- Some Gravel-	1)	Jò ≧	14	<u> </u>	<1	¥	0 1	0 20	3	0	40 50
		Clayey Fine Sand- Some Gravel-	Brown- Moist (SC)	+				À					
				L\$2	14		<1						
5 - ¥				LS3	15		<1						
		Gravelly Fine to Coarse Sand- Tra	ce Silt- Brown- Moist to Wet (SP)	LS4	15		<1	Ш					
				L S 5	12		<1						
10 -	, S 4			LS6	12		<1	-					
		END OF BORING AT 12 FEET.			12		.,						
15 -								-					
-													
20 -								ŀ					
-													
3													
25 -								-					
]													
-													
30 -													
35													
		ATER LEVEL OBSERVATIONS	Notes: 1. THE INDICATED STRATIFICATION LINE	S ARE AP	PROX	IMATE	IN SIT	U, TI	E TRAN	SITION BET	WEEN	MATERI	ALS MAY
GF GF OF	ROUNDWA ROUNDWA DRILLING	NTER ENCOUNTERED DURING DRILLING NTER ENCOUNTERED UPON COMPLETION	BE GRADUAL. 2. NO ODORS NOTED AND NO STAINING 3. A GROUNDWATER SAMPLE WAS COLI SET BETWEEN 4 FEET AND 9 FEET BEID	ECTED FI	ROM A	A TEMPO	DRARY	MOI	NITORIN	G WELL; TH	IE WELI	L SCREE	EN WAS

SET BETWEEN 4 FEET AND 9 FEET BELOW GROUND SURFACE.

4. BORING WAS BACKFILLED WITH SOIL CUTTINGS AND BENTONITE CHIPS AND PATCHED WITH CEMENT CONCRETE.

DRILLER: BM

DRILL METHOD: DIRECT PUSH

WATER LEVEL DURING DRILLING: 6

RIG NO .: ATV

BACKFILL METHOD: NOTE 4



PROJECT NAME:

KLEIN TOOLS

DIRECT PUSH BORING SB6

CLIENT:

PROJECT LOCATION: JONESVILLE, MICHIGAN CITY OF JONESVILLE

BY: CES/BST START: 12/1/10

END: 12/1/10

PROJECT NUMBER: LE61837A

SHEET: 1

DЕРТН (FEET)	N E	PROFILE DESCRIPTION GROUND SURFACE ELEVATION=	SAMPLE TYPE/NUMBER INTERVAL	INCHES OF RECOVERY	BLOWS PER SIX INCHES	PID READINGS	ANALYTICAL SAMPLE	STANDARD PENETRATION TEST RESISTANCES (N-values)
0	o . O .	6 Inches Cement Concrete	LS1			<1	Ĥ	0 10 20 30 40 50
	2.2	Gravelly Fine to Coarse Sand- Trace Silt- Brown- Moist (SP)	LS2	12		<1		
5 -		END OF BORING AT 4 FEET.	Ι.					
10-								
9 79								
15 -								
20 -							-	
25 —								
30 -								
-								
35 — GR	W/ DUNDWA	TER LEVEL OBSERVATIONS Notes: 1. THE INDICATED STRATIFICATION LINES BE GRADUAL BE GRADUAL		PROXI	IMATE.	IN SITL	J, Th	IE TRANSITION BETWEEN MATERIALS MAY
¥ GR(OF	DUNDWA' DRILLING	ER ENCOUNTERED UPON COMPLETION 2 GROUNDWATER WAS NOT ENCOUNTER 3. NO ODORS NOTED AND NO STAINING O 4 THE BORING WAS BACKFILLED WITH SO	BSERVE	D. INGS	AND BE	NTONI	TE C	CHIPS

DRILLER: BM RIG NO.: ATV

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: NOTE 4

WATER LEVEL DURING DRILLING: NONE



PROJECT NAME:

KLEIN TOOLS

DIRECT PUSH BORING SB7

PROJECT LOCATION: JONESVILLE, MICHIGAN

BY: CES/BST START: 12/1/10

END: 12/1/10 SHEET: 1

CLIENT:	CITY OF JONESVILLE	PI. OI						1837A SHEET: 1
21	PROFILE DESCRIPTION		SAMPLE TYPE/NUMBER INTERVAL	INCHES OF RECOVERY			AL SAMPLE	STANDARD PENETRATION TEST RESISTANCES (N-values)
DEPTH (FEET) SYMBOLIC PROFILE	GROUND SURFACE ELEVATION=		SAMPLE T INTERVAL	INCHES 0	BLOWS PER SIX INCHES	PID READINGS	ANALYTIC/	0 10 20 30 40 9
° 💢	3 Inches Asphalt Concrete		LS1	12		<1	П	
	Gravelly Fine Sand- Some Silt, Bricks, Glass, Cinders and Sla	o- Dark Brown-	LS2	12		<1		
5-	Moist (SP/Fill)		LS3	14		4.9	- [7]	
¥ 1			LS4	14		5.6	M	
10 -	Silty Fine to Medium Sand- Brown- Wet (SM)		LS5	12		<1	M	
***	Organic Silt- Trace Wood Fibers and Fine Sand- Brown- Moist Amorphic Peat- Black- Moist (Pt) END OF BORING AT 12 FEET.	(OL)	LS6	12		12		
15 —								
20 -							-	
25 -								
30 -								
35	MATERIEVEL ORSERVATIONS	OATIGO ATION AND AND AND AND AND AND AND AND AND AN						
₩ GROUNDW	ATER ENCOUNTERED DURING DRILLING ATER ENCOUNTERED UPON COMPLETION G BE GRADUAL 2. NO ODORS NOTED 3. A GROUNDWATER SET BETWEEN 6.5 FEE	AND NO STAINING OB SAMPLE WAS COLLECT T AND 11.5 FEET BEL	SSERVER CTED FR	OM A	TEMPO	DRARY	мом	HE TRANSITION BETWEEN MATERIALS MAY NITORING WELL; THE WELL SCREEN WAS S AND PATCHED WITH ASPHALT

DRILLER: BM RIG NO.: ATV DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: NOTE 4

WATER LEVEL DURING DRILLING: 8.5



PROJECT NAME:

KLEIN TOOLS

HAND AUGER SB8

PROJECT LOCATION: JONESVILLE, MICHIGAN

BY: CES/BST START: 12/1/10

END: 12/1/10 SHEET: 1

CLIEN		CITY OF JONESVILLE		PROJE						SHI	EET: 1	
DEPTH (FEET)	SYMBOLIC PROFILE		PROFILE ESCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	INCHES OF RECOVERY	BLOWS PER SIX INCHES	PID READINGS	ANALYTICAL SAMPLE	0 1	STANDARD TEST RESIS (N-values)	PENETRAT TANCES	ION 40 50
0		Silty Fine Sand- Some Gravel- Da Silty Fine Sand- Some Concrete, I (SM/Fill) END OF HAND AUGER AT 2.5 Ft	Brick, Slag and Cinders- Dark Brown- Moi:	AS1	12 12		<1 <1 <1	X				
5 -												
10 -												
15 -												
20 -												
25 -												
30 -												
₹ GF	ROUNDW	VATER LEVEL OBSERVATIONS ATER ENCOUNTERED DURING DRILLING ATER ENCOUNTERED UPON COMPLETION 3	Notes: 1. THE INDICATED STRATIFICATION LI BE GRADUAL. 2. GROUNDWATER WAS NOT ENCOUN 3. NO ODORS NOTED AND NO STAININ 4. THE BORING WAS BACKFILLED WIT 5. REFUSAL ENCOUNTERED AT SAMPI	ITERED. IG OBSERV H SOIL CUT	ED.					SITION BETW	EEN MATEI	RIALS MAY
DRILLER	. BM		DRILL METHOD: HAND AUGER			WAT	ED I EV	/EI F	MIDINO F	RILLING: N	ONE	

RIG NO.: ATV

BACKFILL METHOD: NOTE 4

WATER LEVEL DURING DRILLING: NONE



PROJECT NAME:

KLEIN TOOLS

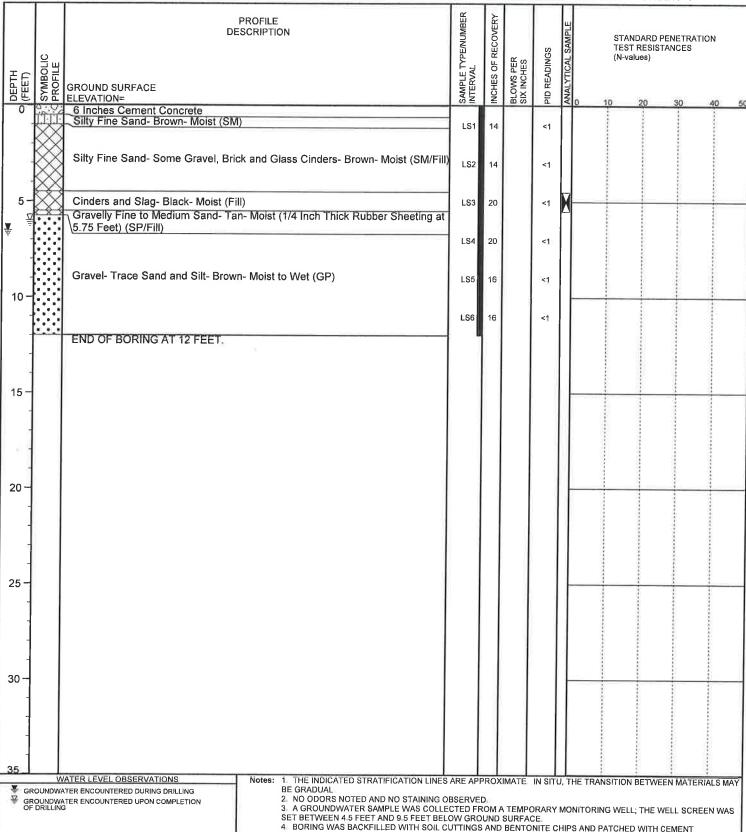
DIRECT PUSH BORING SB9

PROJECT LOCATION: JONESVILLE, MICHIGAN

BY: CES/BST START: 12/1/10

END: 12/1/10

CITY OF JONESVILLE **PROJECT NUMBER: LE61837A** SHEET: 1



DRILLER: BM RIG NO .: ATV

CONCRETE DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: NOTE 4

WATER LEVEL DURING DRILLING: 6.5



PROJECT NAME:

CLIENT:

KLEIN TOOLS

CITY OF JONESVILLE

DIRECT PUSH BORING SB10

PROJECT LOCATION: JONESVILLE, MICHIGAN

BY: CES/BST START: 12/1/10

PROJECT NUMBER: LE61837A

END: 12/1/10

SHEET: 1

CLIE	NII.	CITY OF JONESVILLE		PROJ	-611	NOMB	EK: L	Eo	103/A		SHEET	: 1	
DEPTH (FEET)		GROUND SURFACE ELEVATION=	PROFILE SCRIPTION	SAMPLE TYPE/NUMBER	INCHES OF RECOVERY	BLOWS PER SIX INCHES	PID READINGS	ANALYTICAL SAMPLE	0 1	STANDA TEST RE (N-value:	ESISTAN 5)		ON 40 50
0	0.0	6 Inches Cement Concrete						П					
8 3 3		Silty Fine to Medium Sand- Brown	- Moist (SM/Fill)	LS2	Ų		<1						
5 -		Gravel- Trace Silt and Sand- Brow	п- Moist to Wet (GP)	LS3			<1 <1						
	1 1	END OF BORING AT 8 FEET.						Ш					
	1							П					
10-	1							H					-
	- 1							Н					
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								П					
	1							П					
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- 4											- 1		i I
2.5				1					-				
,]													
35	<u> </u>	ATER LEVEL OBSERVATIONS	Notes: 1 THE INDICATED STRATIFICATION LI	NES ARE A	PPRO	XIMATE	IN SIT	U, T	HE TRAN	ISITION BE	TWEEN	MATERI	ALS MAY
₩ G	ROUNDW	TER ENCOUNTERED DURING DRILLING	BE GRADUAL 2 NO ODORS NOTED AND NO STAININ						**				
₩ G	ROUNDWA F DRILLIN	TER ENCOUNTERED UPON COMPLETION	3. THE BORING WAS BACKFILLED WIT			S AND B	ENTON	ITE	CHIPS A	ND PATCH	ED WITH	H CEMEN	п
			CONCRETE:										
											-		

DRILLER: BM RIG NO.: ATV

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: NOTE 3

WATER LEVEL DURING DRILLING: 7



PROJECT NAME:

KLEIN TOOLS

DIRECT PUSH BORING SB11

BY: CES/BST START: 12/2/10

END: 12/2/10

PROJECT LOCATION: JONESVILLE, MICHIGAN PROJECT NUMBER: LE61837A SHEET: 1 CITY OF JONESVILLE

рертн (FEET)	SYMBOLIC PROFILE	DE GROUND SURFACE	PROFILE SCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	INCHES OF RECOVERY	BLOWS PER SIX INCHES	PID READINGS	ANALYTICAL SAMPLE	TES	NDARD PE T RESISTA values)	ENETRATIO ANCES	ON
9 -	SH	ELEVATION= _6 Inches of Concrete				區区		₹	0 10	20	30	40 50
-		Gravelly Fine Sand- Some Silt- Bro END OF BORING AT 1.25 FEET.	own- Moist (SP/Fill)	LS1	6		<1					
5-								,				
3												
10 -												
6												
15 -								•				
20 -												
25 -												
30 -										***************************************	***************************************	
35 ▼ G ∀ G	ROUNDW	VATER LEVEL OBSERVATIONS VATER ENCOUNTERED DURING DRILLING VATER ENCOUNTERED UPON COMPLETION G	Notes: 1. THE INDICATED STRATIFICATION LIN BE GRADUAL. 2. GROUNDWATER WAS NOT ENCOUN 3. NO ODORS NOTED AND NO STAININ 4. THE BORING WAS BACKFILLED WITH CONCRETE 5. REFUSAL ENCOUNTERED AT SAMPL	TERED. 3 OBSERV I SOIL CU	ED.							
DRILLER	R: BM		DRILL METHOD: DIRECT PUSH			WAT	ER LEV	'EL	DURING DRILL	.ING: NO	NE	

RIG NO.: ATV

BACKFILL METHOD: NOTE 4



PROJECT NAME:

KLEIN TOOLS

DIRECT PUSH BORING SB12

PROJECT LOCATION: JONESVILLE, MICHIGAN

BY: CES/BST START: 12/1/10

END: 12/1/10

CLIENT: CITY OF JONESVILLE PROJECT NUMBER: LE61837A SHEET: 1 SAMPLE TYPE/NUMBER INTERVAL PROFILE RECOVERY DESCRIPTION STANDARD PENETRATION TEST RESISTANCES READINGS SYMBOLIC PROFILE (N-values) BLOWS PER SIX INCHES INCHES OF **GROUND SURFACE** PID ELEVATION= 3 Inches Asphalt Concrete LS1 15 2.6 Gravelly Fine to Coarse Sand- Some Glass, Cinders, Slag and Brick- Dark Brown- Moist (SP/Fill) LS2 15 <1 **₹** 5 LS3 16 <1 Clayey Fine Sand- Some Gravel- Dark Gray- Wet (SC) Silty Fine Sand- Dark Grayish Brown- Wet (SM) LS4 16 1.5 Amorphic Peat- Black- Wet (Pt) END OF BORING AT 8 FEET. 10 15 20 25 30 WATER LEVEL OBSERVATIONS THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY Notes: BE GRADUAL GROUNDWATER ENCOUNTERED DURING DRILLING GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING 2. A GROUNDWATER SAMPLE WAS COLLECTED FROM A TEMPORARY MONITORING WELL; THE WELL SCREEN WAS SET BETWEEN 3 FEET AND 8 FEET BELOW GROUND SURFACE.

SOLVENT ODOR FROM 5.5 FEET TO 7.5 FEET BELOW GRADE 4. THE BORING WAS BACKFILLED WITH SOIL CUTTINGS AND BENTONITE CHIPS AND PATCHED WITH ASPHALT CONCRETE

DRILLER: BM RIG NO .: ATV

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: NOTE 3

WATER LEVEL DURING DRILLING: 5



PROJECT NAME:

KLEIN TOOLS

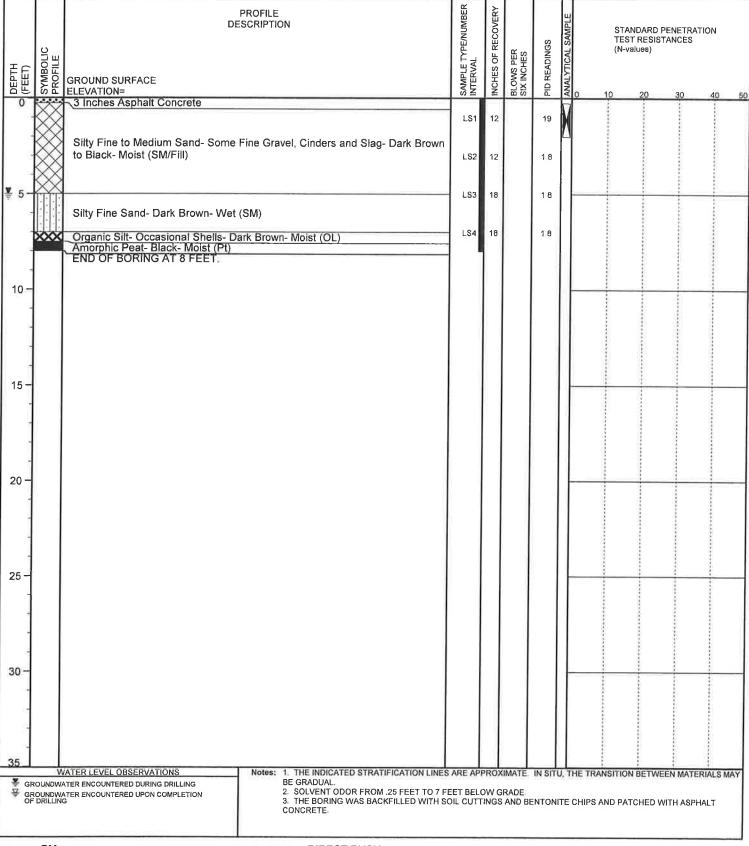
DIRECT PUSH BORING SB13

PROJECT LOCATION: JONESVILLE, MICHIGAN

BY: CES/BST START: 12/1/10

END: 12/1/10

CITY OF JONESVILLE CLIENT: PROJECT NUMBER: LE61837A SHEET: 1



DRILLER: BM RIG NO .: ATV DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: NOTE 2

WATER LEVEL DURING DRILLING: 5



PROJECT NAME:

CLIENT:

KLEIN TOOLS

DIRECT PUSH BORING SB14

PROJECT LOCATION: JONESVILLE, MICHIGAN CITY OF JONESVILLE

BY: CES/BST START: 12/1/10

END: 12/1/10

PROJECT NUMBER: LE61837A

SHEET: 1

DEPTH (FEET) SYMBOLIC	PROFILE DESCRIPTION GROUND SURFACE	SAMPLE TYPE/NUMBER INTERVAL	INCHES OF RECOVERY	BLOWS PER SIX INCHES	PID READINGS	ANALYTICAL SAMPLE	STANDARD PENETRATION TEST RESISTANCES (N-values)
当E あ	ELEVATION=	SAI	Ιž	골ਲ	∃	A.	0 10 20 30 40 50
0	Silty Fine Sand- Some Gravel, Slag and Brick- Dark Brown- Moist (SM/Fill)	LS1	17		<1	X A	
5 —	Silty Fine Sand- Some Organics- Dark Brown- Moist (SM)	LS3	15		<1		
		LS4	15		<1		
¥10 —	Silty Fine Sand- Trace Gravel- Dark Brown to Brown- Moist to Wet (SM)	LS5	0				
	END OF BORING AT 12 FEET.	LS6	0				
15 -						ŀ	
20 -							
25 -							
-							
30 -							
-							
35							
₹ GROUNI	WATER LEVEL OBSERVATIONS WATER ENCOUNTERED DURING DRILLING WATER ENCOUNTERED UPON COMPLETION LING Notes: 1. THE INDICATED STRATIFICATION LI BE GRADUAL 2. NO ODORS NOTED AND NO STAININ 3. A GROUNDWATER SAMPLE WAS CO SET BETWEEN 7 FEET AND 12 FEET BE 4. DRILLER REPORTED NO RECOVERY 5. BORING WAS BACKFILLED WITH SO	G OBSERVE LLECTED F LOW GROU AT LS5 ANI	ED ROM A IND SI D LS6	A TEMP JRFACE	ORARY E	'MO	NITORING WELL; THE WELL SCREEN WAS

DRILLER: BM RIG NO.: ATV

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: NOTE 4

WATER LEVEL DURING DRILLING: 10

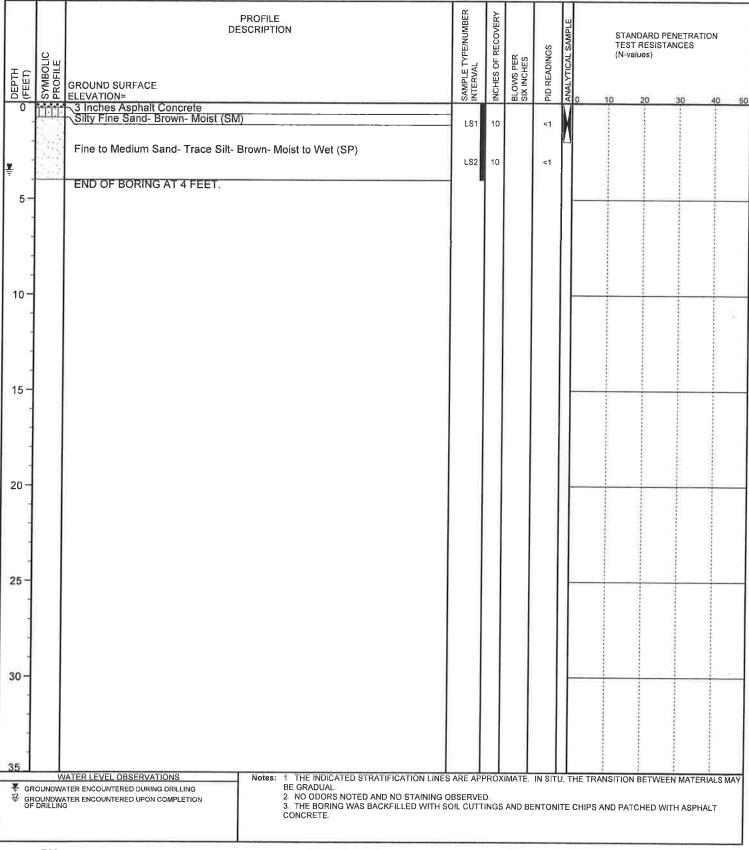


PROJECT NAME:

KLEIN TOOLS

DIRECT PUSH BORING SB15

PROJECT LOCATION:JONESVILLE, MICHIGANBY: CES/BST START: 12/1/10END: 12/1/10CLIENT:CITY OF JONESVILLEPROJECT NUMBER: LE61837ASHEET: 1



DRILLER: BM RIG NO.: ATV

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: NOTE 3

WATER LEVEL DURING DRILLING: 3.5



PROJECT NAME:

KLEIN TOOLS

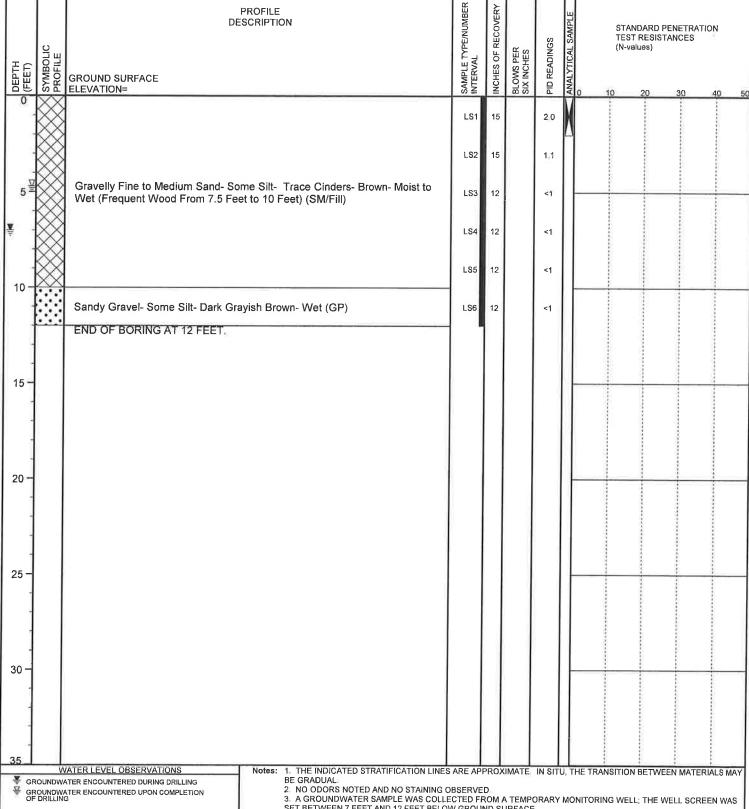
DIRECT PUSH BORING SB16

PROJECT LOCATION: JONESVILLE, MICHIGAN

BY: CES/BST START: 12/1/10

END: 12/1/10

CLIENT: CITY OF JONESVILLE **PROJECT NUMBER: LE61837A** SHEET: 1



SET BETWEEN 7 FEET AND 12 FEET BELOW GROUND SURFACE.

4. BORING WAS BACKFILLED WITH SOIL CUTTINGS AND BENTONITE CHIPS.

DRILLER: BM RIG NO .: ATV DRILL METHOD: DIRECT PUSH

WATER LEVEL DURING DRILLING: 7

BACKFILL METHOD: NOTE 4



PROJECT NAME:

KLEIN TOOLS

DIRECT PUSH BORING SB17

SHEET: 1

PROJECT LOCATION: JONESVILLE, MICHIGAN

BY: CES/BST START: 12/2/10

END: 12/2/10

CITY OF JONESVILLE PROJECT NUMBER: LE61837A

FROFILE DESCRIPTION Section Profile Pro	CLILIA		CITY OF JOINESVILLE		PROJE	CIN	IOIAIDI	EK: L	.0	103/A	51	IEET:	1
Silty Fine Sand- Trace Siag- Dark Brown- Moist (SM/Fill) Fine Sand- Trace Siag- Dark Brown- Moist (SC) Clayery Sand- Trace Stave- Brown- Moist (SC) END OF BORING AT 4 PEET. Sand- Trace Stave- Brown- Moist (SC) END OF BORING AT 4 PEET. Note: 1 THE MICANED STRATFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN AMAIENALS ME BECIDADURAL 2 GROUNDWATER INCOUNTERED UNDER COMPLETION OF SECULIAR STRATFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN AMAIENALS ME BECIDADURAL 2 GROUNDWATER INCOUNTERED UNDER COMPLETION OF THE BORING AND SENTING AND SENTINGS AND	ЕРТН ЕЕТ)	YMBOLIC	GROUND SURFACE		MPLE TYPE/NUMBER FERVAL	CHES OF RECOVERY	OWS PER CINCHES) READINGS	ALYTICAL SAMPLE		TEST RES	D PENETI ISTANCE	RATION S
Sinches Cement Concrete Sity Fine Sand- Trace Stage Dark Brown- Moist (SM/Fill) Fine Sand- Trace Site Prown- Moist (SP) Clayey Sand- Trace Site Prown- Moist (SC) END OF BORING AT 4 FEET. Note: 1 THE MIDCARD STRATFICATION LINES ARE APPROXIMATE. IN SITU. THE TRANSITION BETWEEN AMAIERIALS MS of CARDUAL. 20 GROUNDWATER BIOCHATSKIC LIPID OXIPILETON SITURD CARDUAL 15 12 11 11 11 12 11 11 11 11 11 11 11 11	흐느	SOF	ELEVATION=		S ≥	Ĭ	₩ S	1 1	¥	0 1	0 20	30	40
Silly Fine Sand- Trace Site Drawn Moist (SMFill) Fine Sand- Trace Site Grave Brown- Moist (SP) Claywy Sand- Trace Site Grave Brown- Moist (SC) END OF BORING AT 4 FEET. Notes: 1 The INDICATED STRATEFCATION LINES ARE APPROXIMATE. IN STILL THE TRANSITION BETWEEN MAILENALS WE GROUNDWATER INCOUNTRIED UNIONS ORIGINALS. **GROUNDWATER INCOUNTRIED UNIONS ORIGINAL GROUNDWATER INCOUNTRIED UNIONS ORIGINAL TO UNITS ORIGINA	0		6 Inches Cement Concrete						П			- 1	
Clayery Sand-Trace Gravel-Brown-Moist (SC) END OF BORING AT 4 FEET. 20 25 WATER LEVEL GISSERVATIONS GROUNDWATER ENGLINTERED DURING DISLING GROUNDWATER ENGLINTERED DURING DISLING GROUNDWATER ENGLINTERED DURING DISLING GROUNDWATER ENGLINTERED DURING COMPLETION COMMISSION OF THE PRODUITE PRODUITE HIS AND PATCHED WITH CHARST HE MOIGHT WAS NOT SNOOWHERD. 2 GROUNDWATER ENGLINTERED DURING COMPLETION COMMISSION OF THE PRODUITE PRODUITE HIS AND PATCHED WITH CHARST HE BEGRADIAL. 2 GROUNDWATER ENGLINTERED DURING COMPLETION COMMISSION OF THE PRODUITE PR		\otimes	Silty Fine Sand- Trace Slag- Dark	Brown- Moist (SM/Fill)	LS1	12		<1	Ш				
35 - WATER LEVEL OBSERVATIONS 36 GROUNDWATER ENCOUNTERED UPON COMPLETION 37 GROUNDWATER ENCOUNTERED UPON COMPLETION 38 GROUNDWATER ENCOUNTERED UPON COMPLETION 39 GROUNDWATER ENCOUNTERED UPON COMPLETION 30 TO STRAIN. 30 GROUNDWATER ENCOUNTERED UPON COMPLETION 31 THE INDICATE STRAIT PROFITION LINES ARE APPROXIMATE. IN SITU. THE THANKITTON BETWEEN MATERIALS MY 32 GROUNDWATER ENCOUNTERED UPON COMPLETION 33 GROUNDWATER ENCOUNTERED UPON COMPLETION 34 GROUNDWATER ENCOUNTERED UPON COMPLETION 35 GROUNDWATER ENCOUNTERED UPON COMPLETION 36 GROUNDWATER ENCOUNTERED UPON COMPLETION 37 GROUNDWATER ENCOUNTERED UPON COMPLETION 38 GROUNDWATER ENCOUNTERED UPON COMPLETION 39 GROUNDWATER ENCOUNTERED UPON COMPLETION 39 GROUNDWATER ENCOUNTERED UPON COMPLETION 30 GROUNDWATER ENCOUNTERED UPON COMPLETION 30 GROUNDWATER ENCOUNTERED UPON COMPLETION 31 THE INDICATE STRAIT PROFITION LINES ARE APPROXIMATE. IN SITU. THE THANKITTON BETWEEN MATERIALS MY 30 GROUNDWATER ENCOUNTERED UPON COMPLETION 30 GROUNDWATER ENCOUNTERED UPON COMPLETION 31 THE REPORT OF THE THE THANKITTON BETWEEN MATERIALS MY 32 GROUNDWATER ENCOUNTERED UPON COMPLETION 33 GROUNDWATER ENCOUNTERED UPON COMPLETION 34 THE REPORT OF THE THE THANKITTON COMPLETION 35 GROUNDWATER ENCOUNTERED UPON COMPLETION 36 GROUNDWATER ENCOUNTERED UPON COMPLETION 37 GROUNDWATER ENCOUNTERED UPON COMPLETION 37 GROUNDWATER ENCOUNTERED UPON COMPLETION 38 GROUNDWATER ENCOUNTERED UPON COMPLETION 39 GROUNDWATER ENCOUNTERED UPON COMPLETION 39 GROUNDWATER ENCOUNTERED UPON COMPLETION 30 GROUNDWATER ENCOUNTERED UPON COMPLETION 30 GROUNDWATER ENCOUNTERED UPON COMPLETION 37 GROUNDWATER ENCOUNTERED UPON COMPLETION 39 GROUNDWATER ENCOUNTERED UPON COMPLETION 30 GROUNDWATER ENCOUNTERED UPON COMPLETION 30 GROUNDWATER ENCOUNTERED UPON COMPLETION 30 GROUNDWATER EN	-				LS2	12		<1	П				
35 - WATER LEVEL OBSERVATIONS 36 GROUNDWATER ENCOUNTERED UPON COMPLETION 37 GROUNDWATER ENCOUNTERED UPON COMPLETION 38 GROUNDWATER ENCOUNTERED UPON COMPLETION 39 GROUNDWATER ENCOUNTERED UPON COMPLETION 30 TO STRAIN. 30 GROUNDWATER ENCOUNTERED UPON COMPLETION 31 THE INDICATE STRAIT PROFITION LINES ARE APPROXIMATE. IN SITU. THE THANKITTON BETWEEN MATERIALS MY 32 GROUNDWATER ENCOUNTERED UPON COMPLETION 33 GROUNDWATER ENCOUNTERED UPON COMPLETION 34 GROUNDWATER ENCOUNTERED UPON COMPLETION 35 GROUNDWATER ENCOUNTERED UPON COMPLETION 36 GROUNDWATER ENCOUNTERED UPON COMPLETION 37 GROUNDWATER ENCOUNTERED UPON COMPLETION 38 GROUNDWATER ENCOUNTERED UPON COMPLETION 39 GROUNDWATER ENCOUNTERED UPON COMPLETION 39 GROUNDWATER ENCOUNTERED UPON COMPLETION 30 GROUNDWATER ENCOUNTERED UPON COMPLETION 30 GROUNDWATER ENCOUNTERED UPON COMPLETION 31 THE INDICATE STRAIT PROFITION LINES ARE APPROXIMATE. IN SITU. THE THANKITTON BETWEEN MATERIALS MY 30 GROUNDWATER ENCOUNTERED UPON COMPLETION 30 GROUNDWATER ENCOUNTERED UPON COMPLETION 31 THE REPORT OF THE THE THANKITTON BETWEEN MATERIALS MY 32 GROUNDWATER ENCOUNTERED UPON COMPLETION 33 GROUNDWATER ENCOUNTERED UPON COMPLETION 34 THE REPORT OF THE THE THANKITTON COMPLETION 35 GROUNDWATER ENCOUNTERED UPON COMPLETION 36 GROUNDWATER ENCOUNTERED UPON COMPLETION 37 GROUNDWATER ENCOUNTERED UPON COMPLETION 37 GROUNDWATER ENCOUNTERED UPON COMPLETION 38 GROUNDWATER ENCOUNTERED UPON COMPLETION 39 GROUNDWATER ENCOUNTERED UPON COMPLETION 39 GROUNDWATER ENCOUNTERED UPON COMPLETION 30 GROUNDWATER ENCOUNTERED UPON COMPLETION 30 GROUNDWATER ENCOUNTERED UPON COMPLETION 37 GROUNDWATER ENCOUNTERED UPON COMPLETION 39 GROUNDWATER ENCOUNTERED UPON COMPLETION 30 GROUNDWATER ENCOUNTERED UPON COMPLETION 30 GROUNDWATER ENCOUNTERED UPON COMPLETION 30 GROUNDWATER EN	l f		Clayey Sand- Trace Gravel- Brown	n- Moist (SC)	1 '	1			П				
20 - 25 - 30 - 30 - 36 GROUNDWATER RECOUNTERED URING ORIGINO \$\frac{\text{e}}{\text{GROUNDWATER RECOUNTERED UPON COWNLETION}}\$ \$\frac{\text{d}}{\text{CROUNDWATER ENCOUNTERED UPON COWNLETION}}\$ \$\frac{\text{d}}{\text{SQR_CROUNDWATER ENCOUNTERED UPON COWNLETION}}\$ \$\frac{\text{d}}{\text{d}}\$ \$\text{d} \text{NO LODGES NOTED AND NO STANNING OBSERVED.} 4. THE BORNING WAS BACKFILLED WITH SQR_COUNTER CHIPS AND PATCHED WITH CEMENT.	5 -		END OF BORING AT 4 FEET.							, , , , , , , , , , , , , , , , , , ,			
20 - 25 - 30 - 30 - 35 WATER LEVEL OBSERVATIONS ** GROUNDWATER ENCOUNTERED DURING DRILLING ** GROUNDWATER ENCOUNTERED UPON COMPLETION ** OR ODDING THE ENCOUN	10 -												
20 - 25 - 30 - 30 - 35 WATER LEVEL OBSERVATIONS ** GROUNDWATER ENCOUNTERED DURING DRILLING ** GROUNDWATER ENCOUNTERED UPON COMPLETION ** OR ODDING THE ENCOUN													
20 - 25 - 30 - 30 - 35 WATER LEVEL OBSERVATIONS ** GROUNDWATER ENCOUNTERED DURING DRILLING ** GROUNDWATER ENCOUNTERED UPON COMPLETION ** OR ODDING THE ENCOUN	15												
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30 - 30 - 30 - 30 - 30 - 30 - 30 - 30 -													
35 WATER LEVEL OBSERVATIONS ▼ GROUNDWATER ENCOUNTERED DURING DRILLING □ GROUNDWATER ENCOUNTERED UPON COMPLETION □ FORILLING □ GROUNDWATER ENCOUNTERED UPON COMPLETION □ GROUNDWATER ENCOUNTERED UPON COMPLETION □ STATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MADE OF DRILLING □ GROUNDWATER ENCOUNTERED UPON COMPLETION □ STATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MADE OF DRILLING □ GROUNDWATER ENCOUNTERED UPON COMPLETION □ STATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MADE OF DRILLING □ GROUNDWATER ENCOUNTERED UPON COMPLETION □ STATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MADE OF DRILLING □ GROUNDWATER ENCOUNTERED UPON COMPLETION □ STATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MADE OF DRILLING □ GROUNDWATER ENCOUNTERED UPON COMPLETION □ STATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MADE OF DRILLING □ GROUNDWATER ENCOUNTERED UPON COMPLETION □ STATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MADE OF DRILLING □ GROUNDWATER ENCOUNTERED UPON COMPLETION □ STATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MADE OF DRILLING □ GROUNDWATER ENCOUNTERED UPON COMPLETION □ STATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MADE OF DRIVEN AND	20-												
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WATER LEVEL OBSERVATIONS GROUNDWATER ENCOUNTERED DURING DRILLING GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING Notes: 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MADE OF DRILLING BE GRADUAL 2. GROUNDWATER WAS NOT ENCOUNTERED. 3. NO ODORS NOTED AND NO STAINING OBSERVED. 4. THE BORING WAS BACKFILLED WITH SOIL CUTTINGS AND BENTONITE CHIPS AND PATCHED WITH CEMENT	ा										•		
WATER LEVEL OBSERVATIONS GROUNDWATER ENCOUNTERED DURING DRILLING GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING Notes: 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MADE OF DRILLING BE GRADUAL 2. GROUNDWATER WAS NOT ENCOUNTERED. 3. NO ODORS NOTED AND NO STAINING OBSERVED. 4. THE BORING WAS BACKFILLED WITH SOIL CUTTINGS AND BENTONITE CHIPS AND PATCHED WITH CEMENT	30												
WATER LEVEL OBSERVATIONS Solution Water Level Observations In the indicated Stratification lines are approximate. In situ, the transition between materials materi	307					- [- 1						
WATER LEVEL OBSERVATIONS Solution Water Level Observations In the indicated Stratification lines are approximate. In situ, the transition between materials materi	3												
WATER LEVEL OBSERVATIONS Solution Water Level Observations In the indicated Stratification lines are approximate. In situ, the transition between materials materi	-					1							
WATER LEVEL OBSERVATIONS Solution Water Level Observations In the indicated Stratification lines are approximate. In situ, the transition between materials materi	34												1
F GROUNDWATER ENCOUNTERED DURING DRILLING GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING SO DO DRILLING HE BORING WAS BACKFILLED WITH SOIL CUTTINGS AND BENTONITE CHIPS AND PATCHED WITH CEMENT	35		Nada - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -			\Box							
	Ţ GRO Q GRO OF	OUNDWA	TER ENCOUNTERED DURING DRILLING	BE GRADUAL 2. GROUNDWATER WAS NOT ENCOUNTE 3. NO ODORS NOTED AND NO STAINING 4. THE BORING WAS BACKFILLED WITH S	ERED. OBSERVE	D.							

DRILLER: BM RIG NO.: ATV

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: NOTE 4

WATER LEVEL DURING DRILLING: NONE



PROJECT NAME:

KLEIN TOOLS

DIRECT PUSH BORING SB18

PROJECT LOCATION: JONESVILLE, MICHIGAN

BY: CES/BST START: 12/2/10

END: 12/2/10 SHEET: 1

CLIE		CITY OF JONESVILLE		ROJE							12/2/10	
	T	SITT OF BOTTLES VILLE			T	T	ER. L	.E0	103/A		HEET: 1	
рертн (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION GROUND SURFACE ELEVATION=		SAMPLE TYPE/NUMBER INTERVAL	INCHES OF RECOVERY	BLOWS PER SIX INCHES	PID READINGS	ANALYTICAL SAMPLE	0 10	TEST RES	D PENETRA SISTANCES	ATION 40
0	××	6 Inches Cement Concrete						Ħ			1	-70
		Silty Fine Sand- Trace Slag- Brown- Moist (SM/Fill)		LS1	10		1,3					
		Slag, Cinders, Sand and Gravel- Black- Moist (Fill)		L\$2	10		3.1	M				
		Silty Fine Sand- Brown- Moist (SM)					===	П				
5		Sandy Clay- Some Silt- Trace Gravel- Brown- Moist (CL)		LS3	18		<1	H				
3° 3				LS4	18		<1					
		Gravelly Fine to Coarse Sand- Brown- Moist to Wet (SW)		LS5	24		17					
10 -				LS6	2.2			-				-
18		END OF BORING AT 11 FEET.		Loo	12		15					
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15 -								-	_			_
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20 -												
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30 -												
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35_		ATER LEVEL OBSERVATIONS Notes: 1. THE INDICATED STRATIFICATION	LINES	ARE APP	ROXI	MATE	IN SITU	I, TH	E TRANS	ITION BET	VEEN MATE	RIALS MAY
		TER ENCOUNTERED DURING DRILLING TER ENCOUNTERED UPON COMPLETION TER ENCOUNTERED UPON COMPLETION THE ENCOUNTERED UPON COMPLETION THE ENCOUNTERED UPON COMPLETION THE ENCOUNTERED AND NO STAIN T	IING OE	SERVED CTED FR	OM A	TEMPO	RARY I	MON	IITORING	WELL; THI	E WELL SCR	
-		001101101										

DRILLER: BM RIG NO.: ATV

DRILL METHOD: DIRECT PUSH

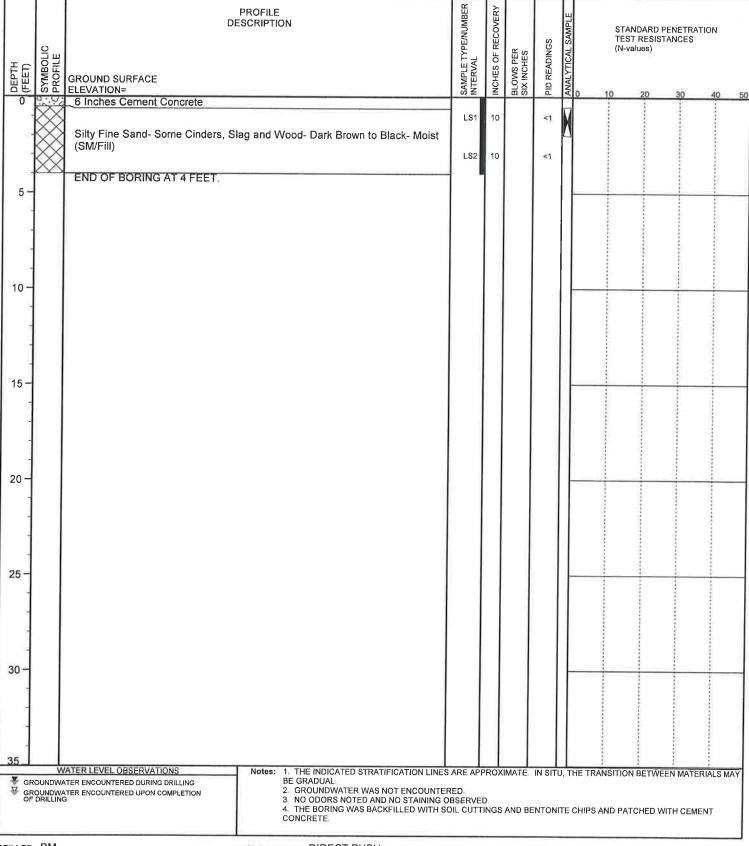
BACKFILL METHOD: NOTE 4

WATER LEVEL DURING DRILLING: 6



PROJECT NAME: KLEIN TOOLS DIRECT PUSH BORING SB19

PROJECT LOCATION:JONESVILLE, MICHIGANBY: CES/BST START: 12/2/10END: 12/2/10CLIENT:CITY OF JONESVILLEPROJECT NUMBER: LE61837ASHEET: 1



DRILLER: BM RIG NO.: ATV

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: NOTE 4

WATER LEVEL DURING DRILLING: NONE



PROJECT NAME:

KLEIN TOOLS

DIRECT PUSH BORING SB20

PROJECT LOCATION: JONESVILLE, MICHIGAN

BY: CES/BST START: 12/1/10

END: 12/1/10

PROJECT NUMBER: LE61837A SHEET: 1 CITY OF JONESVILLE CLIENT: SAMPLE TYPE/NUMBER INTERVAL **PROFILE** DESCRIPTION STANDARD PENETRATION TEST RESISTANCES PID READINGS (N-values) SYMBOLIC PROFILE BLOWS PER SIX INCHES INCHES OF **GROUND SURFACE ELEVATION=** 3 Inches of Asphalt Concrete LS1 10 Silty Fine Sand- Trace Cinders- Dark Brown- Moist (SM/Fill) 10 LS₂ 1.5 LS3 12 2.5 Silty Fine Sand- Some Cinders and Slag- Dark Gray to Black- Moist (Fill) 12 2.6 Silty Fine Sand- Dark Gray to Black- Wet- (SM) LS5 12 2.1 10 LS6 12 <1 Silty Fine to Coarse Gravel- Trace Sand- Yellowish Brown- Wet (SW) END OF BORING AT 12 FEET. 15 20 25 30 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY WATER LEVEL OBSERVATIONS GROUNDWATER ENCOUNTERED DURING DRILLING 2. A GROUNDWATER SAMPLE WAS COLLECTED FROM A TEMPORARY MONITORING WELL; THE WELL SCREEN WAS SET BETWEEN 6 FEET AND 11 FEET BELOW GROUND SURFACE GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING SEPTIC-TYPE ODOR FROM 5.5 FEET TO 10.5 FEET BELOW GRADE 4 BORING WAS BACKFILLED WITH SOIL CUTTINGS AND BENTONITE CHIPS AND PATCHED WITH ASPHALT CONCRETE

DRILLER: BM

DRILL METHOD: DIRECT PUSH

WATER LEVEL DURING DRILLING: 7

RIG NO.: ATV

BACKFILL METHOD: NOTE 3



PROJECT NAME:

KLEIN TOOLS

DIRECT PUSH BORING SB21

PROJECT LOCATION: JONESVILLE, MICHIGAN

BY: CES/BST START: 12/2/10

END: 12/2/10

CITY OF JONESVILLE PROJECT NUMBER: LE61837A SHEET: 1 **PROFILE** SAMPLE TYPE/NUMBER INTERVAL RECOVERY DESCRIPTION STANDARD PENETRATION TEST RESISTANCES PID READINGS SYMBOLIC PROFILE (N-values) BLOWS PER SIX INCHES INCHES OF **GROUND SURFACE** ELEVATION= 6 Inches of Cement Concrete Fine Sand- Trace Silt- Brown- Moist (SP) LS2 1.4 5 LS3 13 15 LS4 13 Gravelly Fine to Coarse Sand- Brown- Moist to Wet (SP) LS5 1.8 10 LS6 1.5 END OF BORING AT 12 FEET. 15 20 25 30 WATER LEVEL OBSERVATIONS 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY GROUNDWATER ENCOUNTERED DURING DRILLING BE GRADUAL NO ODORS NOTED AND NO STAINING OBSERVED. GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING 2. A GROUNDWATER SAMPLE WAS COLLECTED FROM A TEMPORARY MONITORING WELL; THE WELL SCREEN WAS SET BETWEEN 5 FEET AND 10 FEET BELOW GROUND SURFACE.

4. BORING WAS BACKFILLED WITH SOIL CUTTINGS AND BENTONITE CHIPS AND PATCHED WITH ASPHALT

DRILLER: BM RIG NO.: ATV

CONCRETE DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: NOTE 4

WATER LEVEL DURING DRILLING: 7



PROJECT NAME:

KLEIN TOOLS

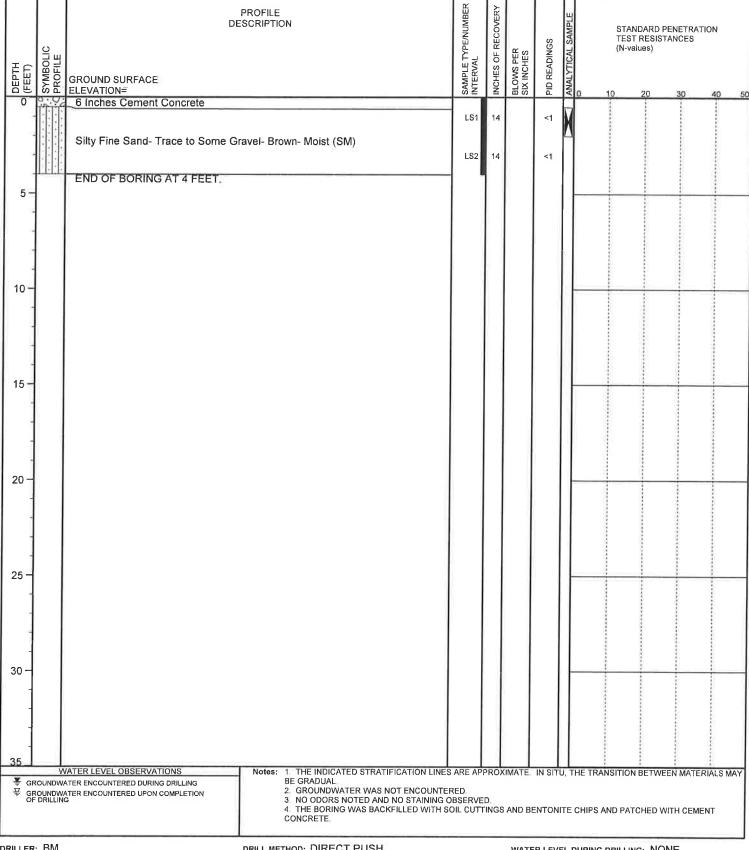
DIRECT PUSH BORING SB22

PROJECT LOCATION: JONESVILLE, MICHIGAN

BY: CES/BST START: 12/2/10

END: 12/2/10

CITY OF JONESVILLE PROJECT NUMBER: LE61837A SHEET: 1



DRILLER: BM RIG NO .: ATV DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: NOTE 4

WATER LEVEL DURING DRILLING: NONE



PROJECT NAME:

KLEIN TOOLS

DIRECT PUSH BORING SB23

PROJECT LOCATION: JONESVILLE, MICHIGAN

BY: CES/BST START: 12/2/10

END: 12/2/10

CLIE		CITY OF JONESVILLE		ROJEC					1837A	END: 1	EET: 1		
		PROFILE DESCRIPTION	1~1					ANALYTICAL SAMPLE		STANDARD PENETRATION TEST RESISTANCES (N-values)			
DEPTH (FEET)	SYMBOLIC PROFILE	GROUND SURFACE ELEVATION=		SAMPLE NTERV	INCHES OF RECOVERY	BLOWS PER SIX INCHES	PID READINGS	INALYT				-40	
0	0.00	6 Inches of Cement Concrete	\neg		-	ш 07	Ь.	Ħ	0 10	20	30	40	50
5-		Silty Fine Sand- Some Cinders, Slag and Brick- Dark Brown- Moist (SM/Fill)		LS1 LS2	13 13		<1 <1 <1	V			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
		Silty Fine Sand- Trace Gravel- Brown- Moist (SM)											
<u>∓</u> ~		Fine Sandy Clay- Trace Gravel- Brown (cl)		LS4	12		<1						
10-		Gravelly Fine to Coarse Sand- Trace Silt- Yellowish Brown- Wet (SW)		LS5	12		<1						
10				LS6	12		<1						
15-		END OF BORING AT 12 FEET.											
25 -													
30													
WATER LEVEL OBSERVATIONS GROUNDWATER ENCOUNTERED DURING DRILLING GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING OF DRILLING Notes: 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL. 2. NO ODORS NOTED AND NO STAINING OBSERVED. 3. A GROUNDWATER SAMPLE WAS COLLECTED FROM A TEMPORARY MONITORING WELL; THE WELL SCREEN WAS SET BETWEEN 6 FEET AND 11 FEET BELOW GROUND SURFACE. 4. BORING WAS BACKFILLED WITH SOIL CUTTINGS AND BENTONITE CHIPS.													

DRILLER: BM RIG NO.: ATV DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: NOTE 4

WATER LEVEL DURING DRILLING: 8



PROJECT NAME:

KLEIN TOOLS

DIRECT PUSH BORING SB24

PROJECT LOCATION: JONESVILLE, MICHIGAN

BY: CES/BST START: 12/1/10

END: 12/1/10

CLIENT: CITY OF JONESVILLE PROJECT NUMBER: LE61837A SHEET: 1 SAMPLE TYPE/NUMBER INTERVAL **PROFILE** DESCRIPTION STANDARD PENETRATION TEST RESISTANCES READINGS SYMBOLIC PROFILE BLOWS PER SIX INCHES (N-values) INCHES OF F GROUND SURFACE PID ELEVATION= Silty Fine Sand- Brown- Moist (SM) LS1 12 LS2 12 5 LS3 LS4 Gravelly Fine to Medium Sand- Trace Silt- Brown- Moist to Wet (SP) LS5 18 <1 10 LS6 18 <1 LS7 15 <1 L\$8 12 15 END OF BORING AT 15.5 FEET. 20 25 30 WATER LEVEL OBSERVATIONS THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY GROUNDWATER ENCOUNTERED DURING DRILLING BE GRADUAL 2 NO ODORS NOTED AND NO STAINING OBSERVED. GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING

DRILLER: BM

RIG NO .: ATV

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: NOTE 4

WATER LEVEL DURING DRILLING: 11

A GROUNDWATER SAMPLE WAS COLLECTED FROM A TEMPORARY MONITORING WELL; THE WELL SCREEN WAS

SET BETWEEN 9 FEET AND 14 FEET BELOW GROUND SURFACE.
4. BORING WAS BACKFILLED WITH SOIL CUTTINGS AND BENTONITE CHIPS.



PROJECT NAME:

KLEIN TOOLS

DIRECT PUSH BORING SB25

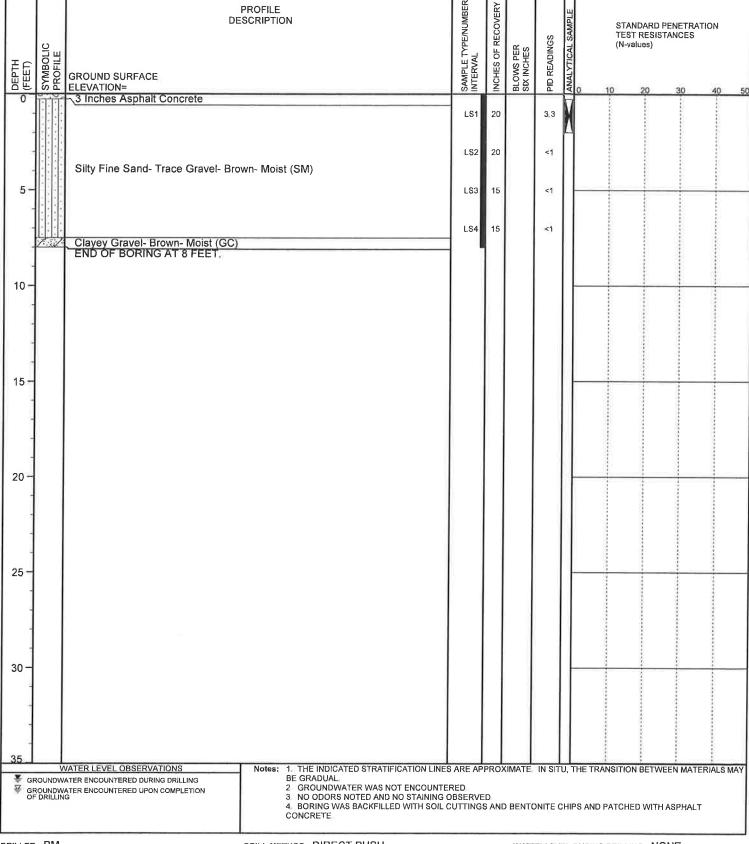
PROJECT LOCATION: JONESVILLE, MICHIGAN CITY OF JONESVILLE

BY: CES/BST START: 12/2/10

PROJECT NUMBER: LE61837A

END: 12/2/10

SHEET: 1 **PROFILE** DESCRIPTION STANDARD PENETRATION



DRILLER: BM RIG NO.: ATV DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: NOTE 4

WATER LEVEL DURING DRILLING: NONE



PROJECT NAME:

KLEIN TOOLS

DIRECT PUSH BORING SB26 END: 12/2/10

PROJECT LOCATION: JONESVILLE, MICHIGAN

CITY OF JONESVILLE

BY: CES/BST START: 12/2/10 PROJECT NUMBER: LE61837A

SHEET: 1

CLIENT:	CITY OF JONESVILL		PROJE	CIN	IUMBI	ER: L	-60	1837A		SHEE.	1: 1	
DEPTH (FEET) SYMBOLIC PROFILE	GROUND SURFACE	PROFILE ESCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	INCHES OF RECOVERY	BLOWS PER SIX INCHES	PID READINGS	ANALYTICAL SAMPLE	STANDARD PENETRATION TEST RESISTANCES (N-values) 0 10 20 30 40				
0	3 Inches of Asphalt			_	B 07	_	Ħ	1	2	0	30	40 50
5—	Silty Fine Sand- Trace Gravel- Br	own- Moist (SM)	LS1 LS2 LS3	14		<1 <1 <1 <1 <1						
10			LS5	10		<1	П					
10	Gravelly Fine to Coarse Sand- Tra	ace Silt- Brown- Moist (SP)	LS6	10		<1						
15 - 20 - 25 -												
35												*
WATER LEVEL OBSERVATIONS Solution Solution Water Level Observations Notes: 1 The Indicated Stratification Lines are approximate in Situ, the transition between material Be Gradual. 2 Groundwater encountered upon completion of Drilling 3 NO ODORS NOTED AND NO STAINING OBSERVED. 4 BORING WAS BACKFILLED WITH SOIL CUTTINGS AND BENTONITE CHIPS AND PATCHED WITH ASPHALT CONCRETE							ALS MAY					
ORILLER: BM		DRILL METHOD: DIRECT PUSH	HOD: DIRECT PUSH WATER LEVEL DURING DRILLING: NONE									

RIG NO.: ATV

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: NOTE 4

WATER LEVEL DURING DRILLING: NONE