SB-09

Geo Services Inc.
Geotechnical, Environmental & Civil Engineering
805 Lakeview Court, Suite 204
Naperville, Illinois 60565
630-355-1555

SOIL BORING LOG

PAGE 2 of 4
DATE 3/16-17/2009
LOGGED BY DR
GSI JOB No. 08201

ROUTE I-70
DESCRIPTION I-70 Tri-Level Connection IDOT Job No. D-98-059-08
SECTION 82-2-1HVB
LOCATION I-70 Curved Approach Structures
COUNTY St. Clair
DRILLING METHOD 3.25" Hollow Stem Auger
HAMMER TYPE CME Automatic

STRUCT. NO. S.N. 082-0318
Station: 127+00 to 140+74
BORING NO. SB-09
Station: 140+74
Offset: 43.0' Left
Ground Surface Elev. 406.1

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter n/a
Upon Completion n/a
After 24 Hrs. n/a

Description	Elev. (ft)	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SAND–gray– medium dense to dense (A–3)			12		
			15		
			13	NP	20
			8		
			6		
		–45	10	NP	22
			7		
			10		
			11	NP	24
			10		
			23		
		–50	31	NP	24
			9		
			9		
			11	NP	27
			5		
			6		
		–55	8	NP	15
			6		
Gravel seams from –26.0' to –27.5'.			6		
			9	NP	20
			8		
			12		
		–60	14	NP	24
SAND–gray– medium dense to dense (A–3)			8		
			12		
			17	NP	25
			8		
			8		
		–65	9	NP	24
			7		
			11		
			18	NP	29
			9		
			13		
		–70	22	NP	26
			10		
			17		
			28	NP	24
			13		
			9		
		–75	10	NP	14
	330.6				
			11		
			8		
SAND & GRAVEL–brown & gray– medium dense (A–1)			6	NP	12
			20		
			13		
		–80	10	NP	8

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS=Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

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Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter n/a
Upon Completion n/a
After 24 Hrs. n/a

Description	Elev. (ft)	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SAND & GRAVEL medium dense (A–1)	325.6				
			12		
			11		
			10	NP	14
			9		
SAND with Gravel–brown & gray– medium dense (A–1–b)			10		
		–85	9	NP	12
			8		
			11		
			14	NP	9
			8		
			10		
		–90	10	NP	13
	315.6				
			8		
SAND–brown & gray– medium dense (A–3)			9		
			12	NP	12
	313.1				
			12		
SAND with Gravel–brown & gray– dense (A–1–b)			17		
		–95	24	NP	18
	302.6				
			38		
SAND & GRAVEL–brown & gray– very dense (A–1)			40		
			47	NP	4
			31		
			25		
		–100	39	NP	9
SAND & GRAVEL–brown & gray– very dense (A–1)			38		
			43		
			50	NP	8
	303.1				
			31		129
SANDY CLAY LOAM–gray– very stiff to hard (A–6)			23		
		–105	45	8.0B	10
			50/4"		
	299.1				
Drillers Observation: Apparent Bedrock				3.25P	13
	298.1				
RUN 1 (–108.0' to –118.0') Mississippian System, Valmeyeran Series Limestone					
		–110			
Light gray & fine grained with horizontal bedding becoming darker gray @ –115.6. Some chert replacement & numerous horizontal fractures throughout.					
Recovery=100.0% R.Q.D.=58.0%					RUN1
		–115			
	288.1				
RUN 2 (–118.0' to –123.0') Mississippian System, Valmeyeran Series Limestone					RUN 2
		–120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS=Vane Shear Test
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NR-No Recovery

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Groundwater Elevation:
First Encounter n/a
Upon Completion n/a
After 24 Hrs. n/a

Description	Elev. (ft)	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray & fine grained with horizontal bedding. No chert replacement encountered. Horizontal fractures @ –118.6', –121.0', –121.8', –122.2', –122.3' & –122.5'. Recovery=100.0% R.Q.D.=93.0%					
			RUN 2		
	283.1				
End Of Boring @ –123.0' Hollow Stem Augers To –12.5' Rotary Drilling To Completion CME Automatic Hammer 10' Of 4"* Casing Used 109' Of 3"* Casing Used					
		–125			
		–130			
		–135			
		–140			
		–145			
		–150			
		–155			
		–160			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS=Vane Shear Test
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NR-No Recovery

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