

BORING NUMBER B-1
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GFCAC ENGINEERING INC.
8157 E. 46th Street
Tulsa, Oklahoma 74145
Telephone: 918-622-7021

CLIENT HOLLOWAY, UPDIKE & BELLEN, Inc. PROJECT NAME Proposed Single Span Bridge Over Cloud Creek

PROJECT NUMBER G2015029 PROJECT LOCATION State Job No. 31162(04), Muskogee County, OK

DATE STARTED 5/5/15 COMPLETED 5/5/15 GROUND ELEVATION 591.6 ft HOLE SIZE 6 inches

DRILLING CONTRACTOR GFCAC Engineering GROUND WATER LEVELS:
 AT TIME OF DRILLING 13.00 ft / Elev 576.60 ft

DRILLING METHOD Hollow Stem Auger 6" AT END OF DRILLING 12.40 ft / Elev 579.20 ft

LOGGED BY DLK CHECKED BY BKM

NOTES STA 15+45, on Centerline AFTER DRILLING —

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (ROD)	Texas Cone Penetrometer	BLOW COUNTS (N VALUE)	Uncorr. Strength (pcf)	DRY UNIT WT. (pcf)	ATTERBERG LIMITS									
									MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)					
0		LIMESTONE AGGREGATE BASE, gray, 6 inches FILL - Gravel, Silty Sand, Sandstone Cobbles, and Brick Fragments, brown, red, and tan POSSIBLE FILL - Silty Sand, fine, loose, brown	AU															
5		SILTY CLAY with sand, moist, very soft, brown	SS 1	67		2-1-1 (2)			18	23	19	4	78					
10		LEAN CLAY, moist, soft to medium stiff, brown, dark brown, and tan	SS 2	100		2-2-2 (4)			25	35	19	16	91					
15		WEATHERED SHALE, very soft, brown, tan, and amber SHALE, moderately hard to hard, brown, tan, gray, and olive - gray below 15 feet	SS 3 TH 4		50 (1.00) 50 (0.38)	5-33-50/ 2.5"			10	30	20	10	81					
20			TH 5		50 (0.31) 50 (0.13)													
25			TH 6		50 (0.50) 50 (0.25)													
30			TH 7		50 (0.38) 50 (0.06)													
35			TH 8		50 (0.25) 50 (0.13)													
Bottom of borehole at 35.1 feet.			TH 8															

BORING NUMBER B-2
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CLIENT HOLLOWAY, UPDIKE & BELLEN, Inc. PROJECT NAME Proposed Single Span Bridge Over Cloud Creek

PROJECT NUMBER G2015029 PROJECT LOCATION State Job No. 31162(04), Muskogee County, OK

DATE STARTED 5/5/15 COMPLETED 5/5/15 GROUND ELEVATION 580.7 ft HOLE SIZE 6 inches

DRILLING CONTRACTOR GFCAC Engineering GROUND WATER LEVELS:
 AT TIME OF DRILLING — Dry before wash boring.


DRILLING METHOD Hollow Stem Auger 6" AT END OF DRILLING 11.00 ft / Elev 579.70 ft

LOGGED BY DLK CHECKED BY BKM

NOTES STA 16+79, 4 feet Rt of Centerline AFTER DRILLING —

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (ROD)	Texas Cone Penetrometer	BLOW COUNTS (N VALUE)	Uncorr. Strength (pcf)	DRY UNIT WT. (pcf)	ATTERBERG LIMITS									
									MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)					
0		GRAVEL AND SILTY SAND, brown and tan, 13 inches FILL - Gravel and Cobbles, brown FILL - Sandy Lean Clay, moist, brown and tan	AU															
5		- containing few lava rocks at 3.5 feet	SS 1	33		3-3-3 (6)							19					67
10		LEAN CLAY with Sand, moist, soft to medium stiff, brown - dark brown below 9.2 feet	SS 2	89		2-2-2 (4)							24	29	18	11		81
15		SHALEY LEAN CLAY with ferrous deposits, moist, stiff to very stiff, brown, gray, red, and amber WEATHERED SHALE, very soft, brown and gray with ferrous staining SHALE, moderately hard to hard, brown, tan, and gray - gray below 16 feet	SS 3 SS 4 TH 5		50 (0.50) 50 (0.06)	4-20-25 (45) 50/ 5"							15	32	21	11		58
20			TH 6		50 (0.38) 50 (0.00)													
25			TH 7		50 (0.38) 50 (0.12)													
30			TH 8		50 (0.38) 50 (0.06)													
35			TH 9		50 (0.50) 50 (0.13)													
Bottom of borehole at 35.6 feet.			TH 9															

HUB ENGINEERS
 Time of Plot: 6/13/2016 10:41 AM Plot Size: -HUB-HALF.CTB
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CLOUD CREEK	MUSKOGEE COUNTY	Design	TE	05/14
FOUNDATION REPORT		Detail	IS	05/14
		Check	TE	05/14
				
STATE OF OKLAHOMA		DEPARTMENT OF TRANSPORTATION		
		State J/P No. 31162(04)		Sheet No. 12